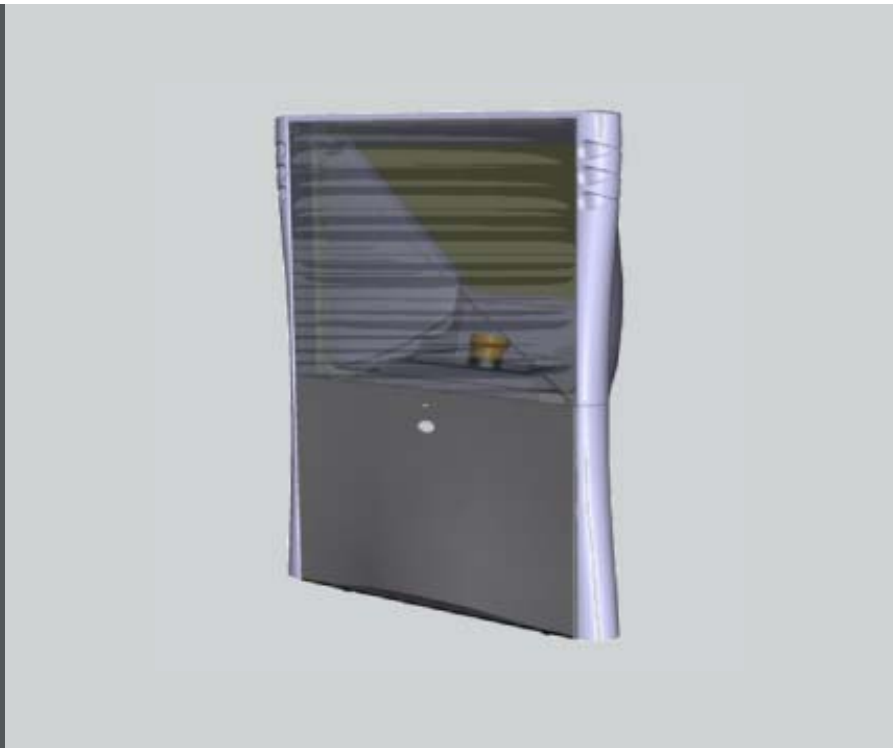
i70 Trace+



Installation Manual

R9040341

R5976660/02
18/11/2005

BARCO

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1. SAFETY

1.1 Safety warnings

WARNING: Before installing the system, first read the safety instructions in the safety manual (R5975125) delivered with the projector.

Disconnect divice

The disconnect device here is the power supply plug. Always ensure easy access to this plug.

Mechanical stability

Always mount the safety plate! Using the i70 without the safety plate will not guarantee maximum stability and may lead to personal injury!

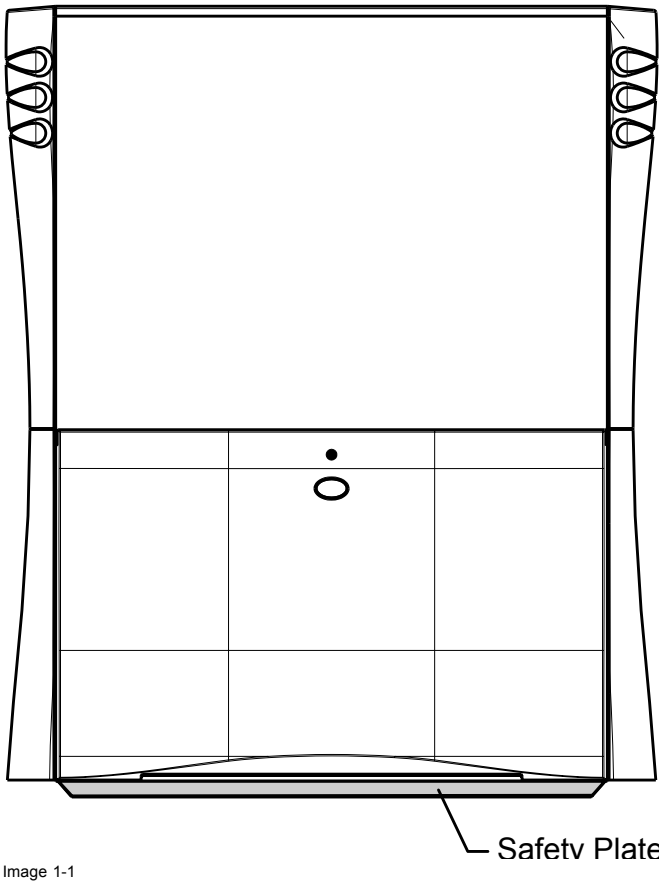


Image 1-1

1.2 Installation guidelines

Ambient temperature check

Max. ambient temperature: 35°C or 95°F

Min. ambient temperature: 0°C or 32°F

The projector will not operate if the ambient air temperature falls outside this range (0°C-35°C or 32°F-95°F).

Environment

Do not install the projector system in a site near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity. Be aware that room heat rises to the ceiling; check that temperature near the installation site is not excessive.

CAUTION: Harmful environmental contamination precaution.

Environment condition check

The system must always be mounted in a manner which ensures the free flow of clean air into the system ventilation inlets as well as free flow at the ventilation outlets. The installation must also allow easy access to consumable parts (dust filters, lamps, ...). For installations in environments where the projector is subject to airborne contaminants such as that produced by smoke machines or similar (these deposit a thin layer of greasy residue upon the projectors internal optics and imaging electronic surfaces, degrading performance), then it is highly advisable and desirable to have this contamination removed prior to it reaching the projectors clean air supply. Devices or structures to extract or shield contaminated air well away from the projector are a prerequisite, if this is not a feasible solution then measures to relocate the projector to a clean air environment should be considered. Make sure the projector never runs with dirty dust filters as this will dramatically reduce the lifetime of the consumables. It is advised to clean the dust filters on a regular basis and to replace them at any lamp change. Barco reserves itself the right to refuse warranty replacement of consumables if they have been used in a projector with dirty air filters. Only use the manufacturer's recommended cleaning kit which has been specifically designed for cleaning optical parts, never use industrial strength cleaners on the projector's optics as these will degrade optical coatings and damage sensitive optoelectronics components.

Failure to take suitable precautions to protect the projector from the effects of persistent and prolonged air contaminants will culminate in extensive and irreversible ingrained optical damage. At this stage cleaning of the internal optical units will be non-effective and impracticable. Damage of this nature is under no circumstances covered under the manufacturer's warranty and may deem the warranty null and void. In such a case the client shall be held solely responsible for all costs incurred during any repair. It is the clients responsibility to ensure at all times that the projector is protected from the harmful effects of hostile airborne particles in the environment of the projector. The manufacturer reserves the right to refuse repair if a projector has been subject to wantful neglect, abandon or improper use.

What about ambient light?

The ambient light level of any room is made up of direct and indirect sunlight and the light fixtures in the room. The amount of ambient light will determine how bright the image will appear. So, avoid direct sunlight on the screen. Window that face the screen should be covered by opaque drapery while the set is being viewed. It is desired to install the projection system in a room whose walls and floor are of non-reflecting material. The use of recessed ceiling lights and a method of dimming those lights to an acceptable level is also important. Too much ambient light will 'wash out' the projected image. This appears as less contrast between the darkest and lightest parts of the image. With bigger screens, the 'wash out' becomes more important. As a general rule, darken the room to the point where there is just sufficient light to read or write comfortably. Spot lighting is desirable for illuminating small areas so that interference with the screen is minimal.

2. PACKAGING AND DIMENSIONS

This chapter handles about the way the i70 Trace+ is packed and gives an overview of the dimensions.

- Packaging
- Box Content
- Dimensions

2.1 Packaging

Way of Packaging

The i70 Trace+ is shipped in a wooden box. To provide protection during transportation, the products are surrounded with foam. The package is secured with banding and fastening clips.

The Shipping Crate

The Shipping Crate consists of a Top Cover Crate and a Bottom Crate.

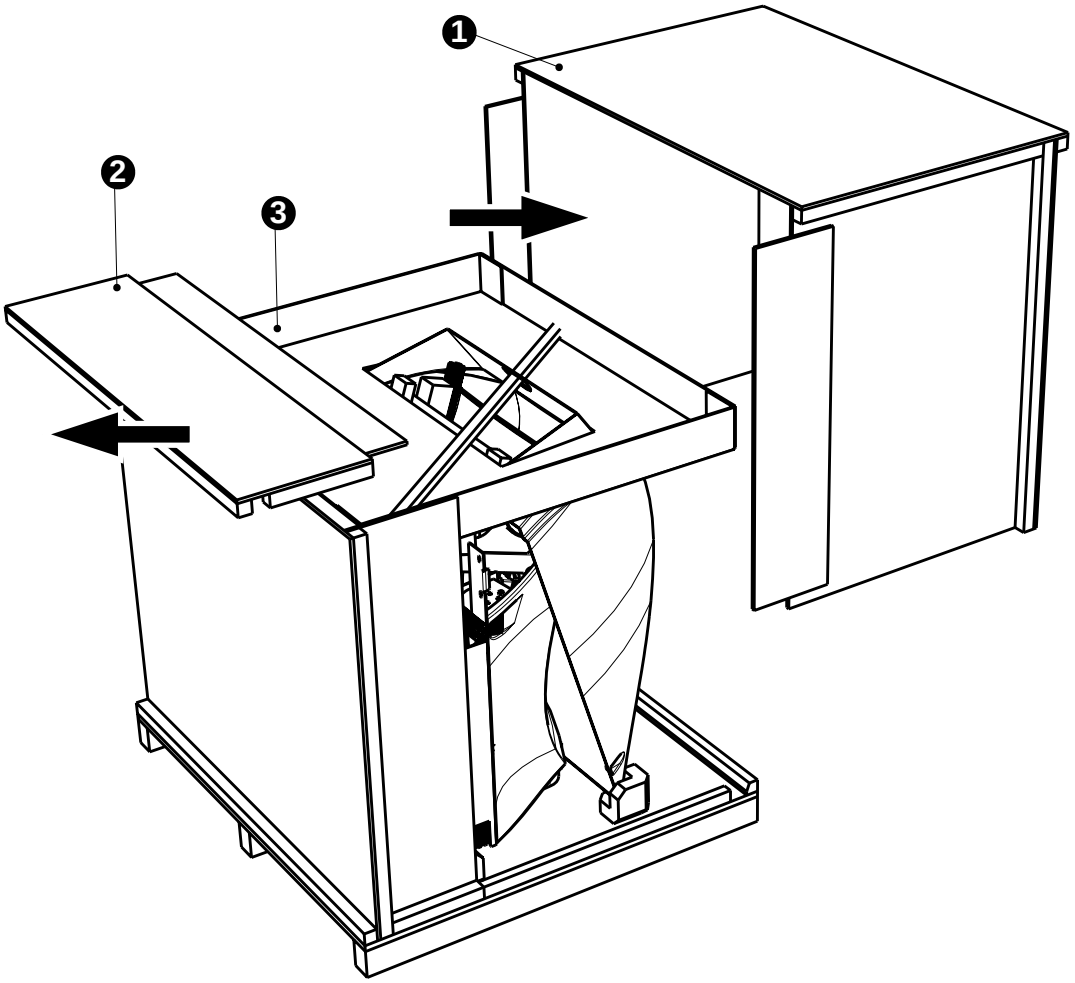


Image 2-1
Shipping Crate

1 Top Cover Crate
2 Small Cover
3 Carton Support

2.2 Box Content

CAUTION: Do not unpack the i70 Trace+ to check this content list, First read this manual and follow the Installation Guidelines to Unpack and Install the i70 Trace+, otherwise damage may occur to the i70 Trace+ parts.

Content

- 1 Barco Trace:
  - 1 Barco i70 Trace+ Projector Unit (Bottom Unit)
  - 1 Barco i70 Trace+ Screen Unit (Top Unit)
- Covers:
  - Left Top Bezel
  - Left Bottom Bezel
  - Right Top Bezel
  - Right Bottom Bezel
  - Rear Top Cabinet
  - Rear Bottom Cabinet (Already mounted on the i70 Trace+ Projector Unit)
  - Front Cover (Already mounted on the i70 Trace+ Projector Unit)
- Bolts to mount the Covers to the i70 Trace+
- 1 Barco TLD 0.8:1 Lens (The lens is packed separately in a carton)
- 1 Remote Control Unit (RCU) + 2 Batteries 1,5V
- 1 Installation Manual
- 1 Owner's Manual

2.3 Dimensions

Dimensions

The dimensions of the i70 Trace+ are given in mm and inch (25,4mm = 1 inch).

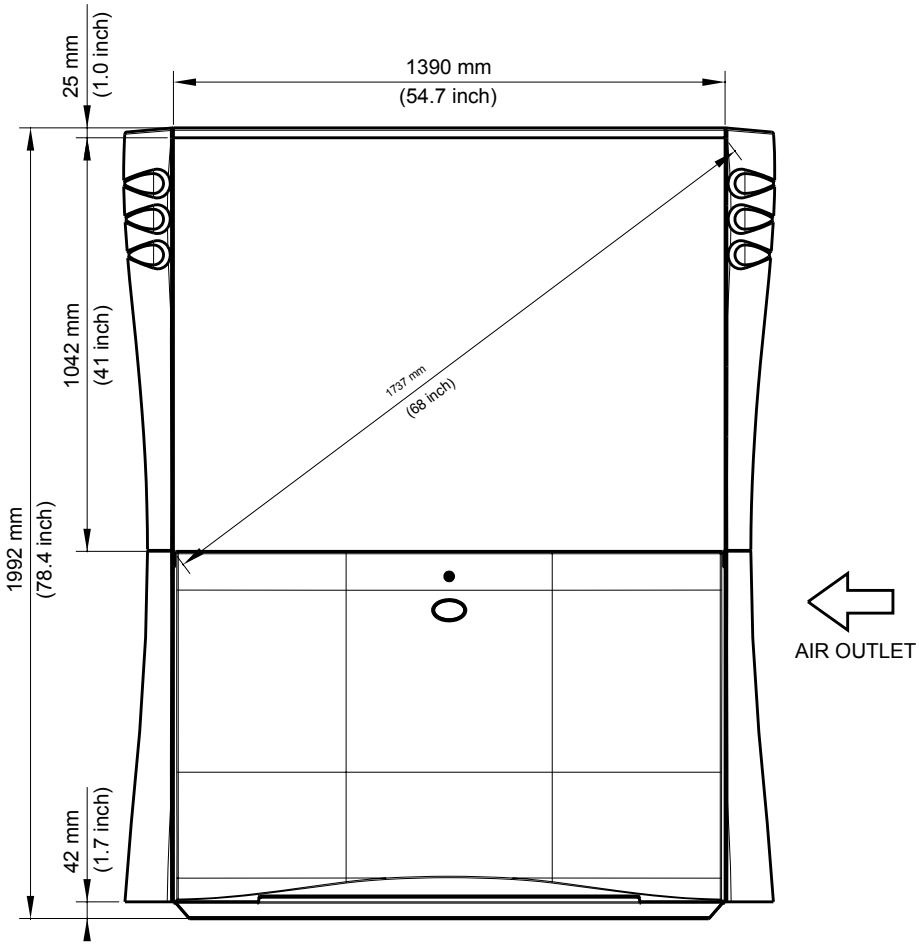


Image 2-2
Front View Dimensions

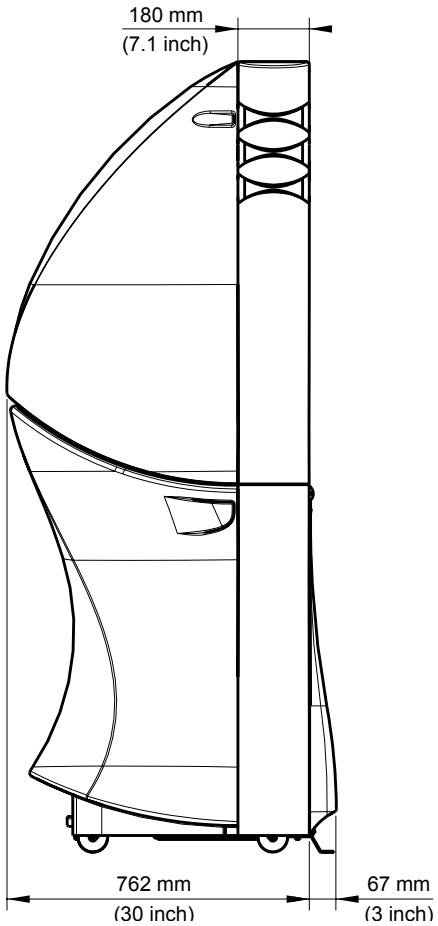


Image 2-3
Right View Dimensions

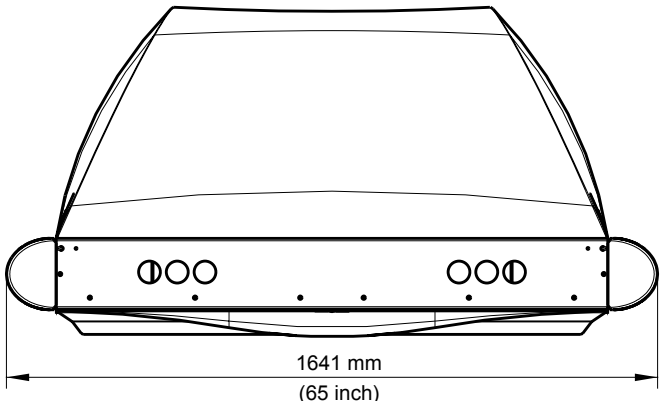


Image 2-4
Top View Dimensions

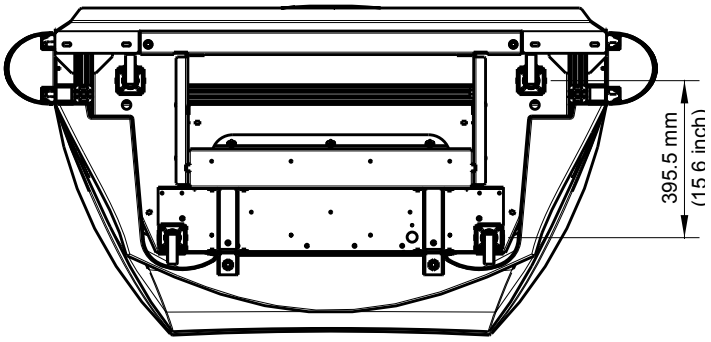


Image 2-5
Bottom View Dimensions

3. SINGLE-CHANNEL INSTALLATION

Overview

- Opening the Shipping Crate
- Unpacking the Carton Boxes
- Unpacking the i70 Trace+
- Lifting the Trace Projector Unit
- Assembling the i70 Trace+
- Stabilizing the i70 Trace+
- Installing the Rear Cabinets
- Installing the Bezels

The i70 Trace+ is fully scalable from a Single-Channel to a Multi-Channel Configuration, this chapter will describe how to install a Single-Channel i70 Trace+ Configuration.

When setting up a Multi-Channel i70 Trace+ Configuration, follow these procedures until mounting the Bezels, then continue with the Multi-Channel i70 Trace+ Installation (see "Multi-Channel Installation", page 31).

CAUTION: First read this manual and follow the Installation Guidelines to Unpack and Install the i70 Trace+, otherwise damage may occur to the i70 Trace+ parts.

Always work with a team of 2 persons to perform these installation procedures.

3.1 Opening the Shipping Crate

Necessary tools

Cross headed screwdriver

How to open the Shipping Crate?

1. Release the fastening clips.

Image 3-1
Release the fastening clips

2. Remove the banding.
3. Loosen the screws on top of the Top Cover Crate.

Image 3-2
Loosen the screws on top of the Top Cover Crate

4. Remove the Top Cover Crate.

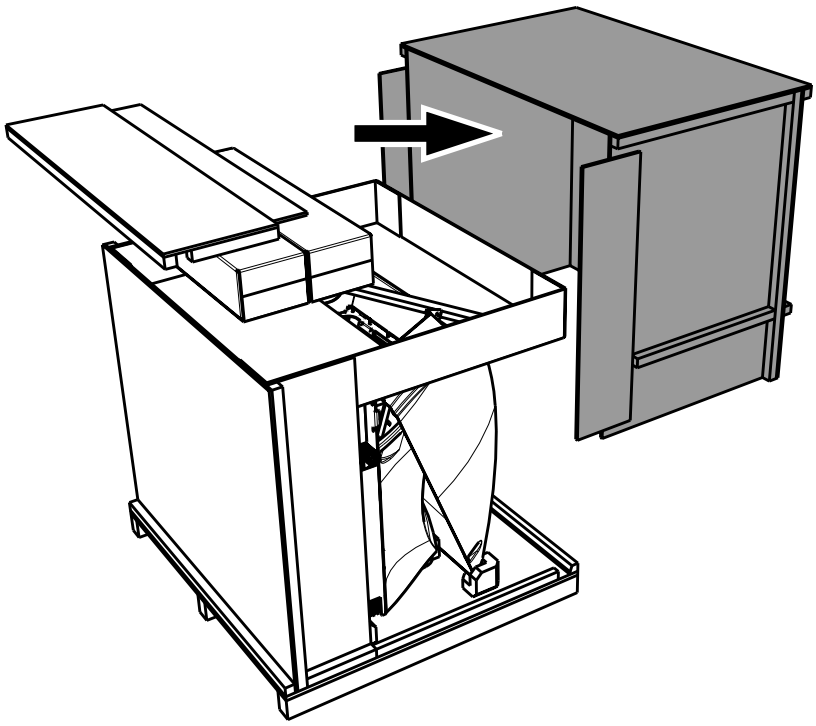


Image 3-3
Remove the Top Cover Crate

3.2 Unpacking the Carton Boxes

Necessary tools

No tools.

How to Unpack the Carton Boxes?

1. Take out the carton box that contains the RCU and the Manuals.

Image 3-4
Carton boxes inside the Crate

1 Barco TLD 0.8:1 Lens
2 Bolts + RCU + Manual
Following blots can be found inside the Carton Box:

a) 6 T-Bolts

b) 4 Bolts M8

c) 2 Bolts M5

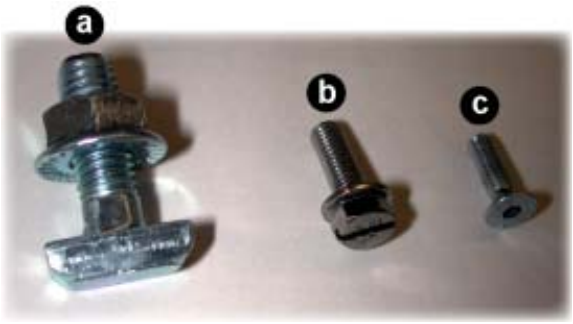


Image 3-5
Bolts included in the Carton Box

2. The carton containing the lens is glued to the Bottom Crate, take out the Lens image 3-4.

3.3 Unpacking the i70 Trace+

CAUTION: All covers are to be handled with care.

Necessary tools

Cross headed screwdriver

How to Unpack the rest of the covers?

1. Loosen the screws of the Small Cover.

Image 3-6
Loosen the screws of the Small Cover

2. Remove this Small Cover.

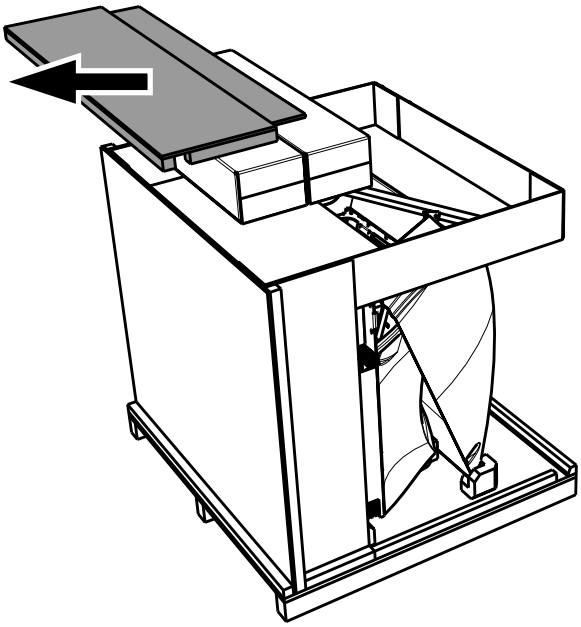


Image 3-7
Remove this Small Cover

3. Take out the 2 Metal Bars that are packed on top of this Cardboard Cover.

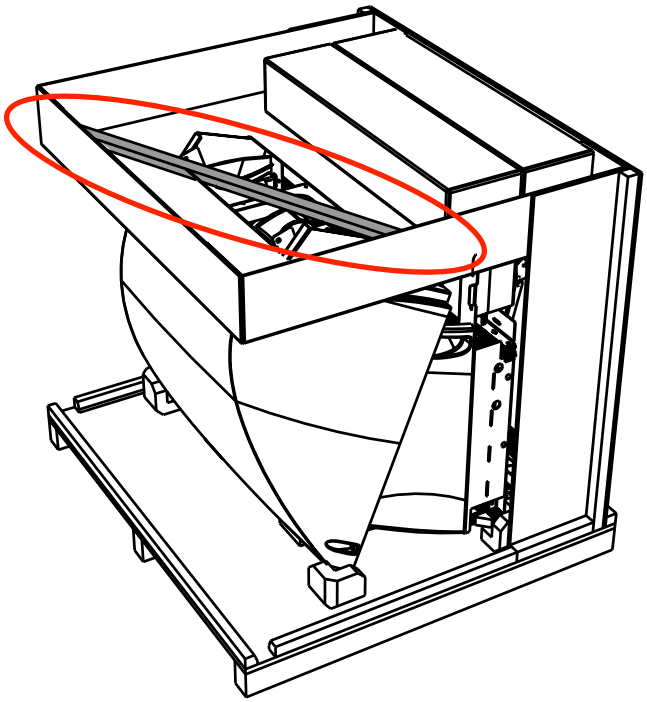


Image 3-8
Take out the 2 Metal Bars

4. Take out the Bezels and put them aside.

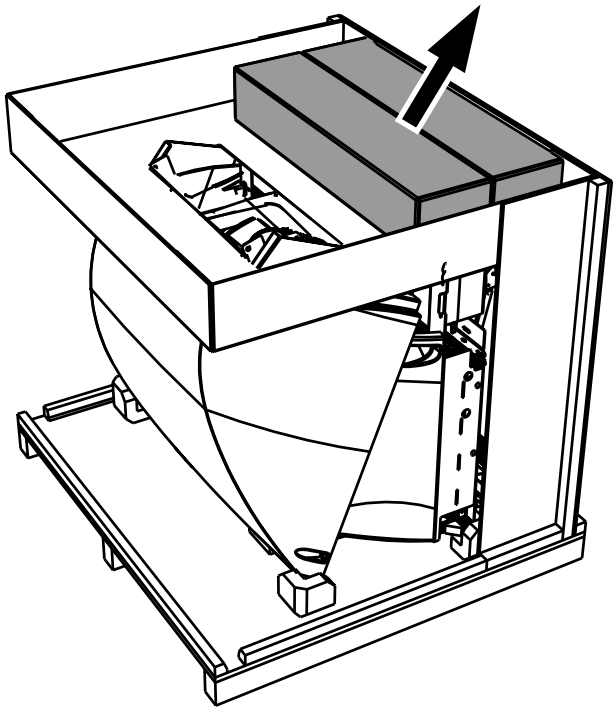


Image 3-9
Take out the Bezels and put them aside

5. Unpack the bezels, these will be mounted on the unit later on.

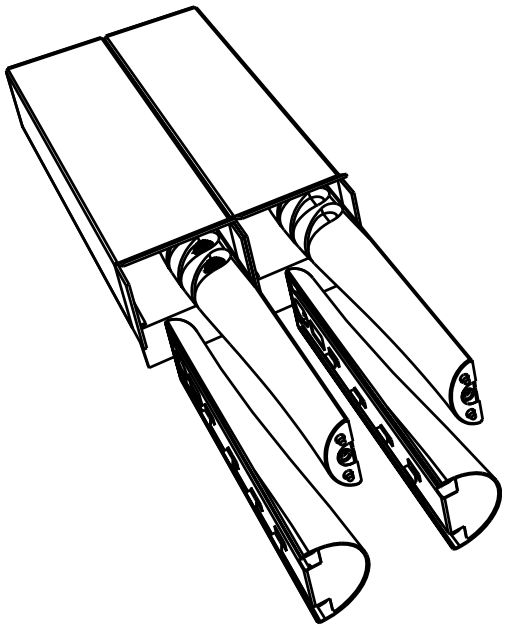


Image 3-10
Unpack the bezels, these will be mounted on the unit later on

6. Remove the Cardboard Cover that secures the Rear Top Cabinet's position.

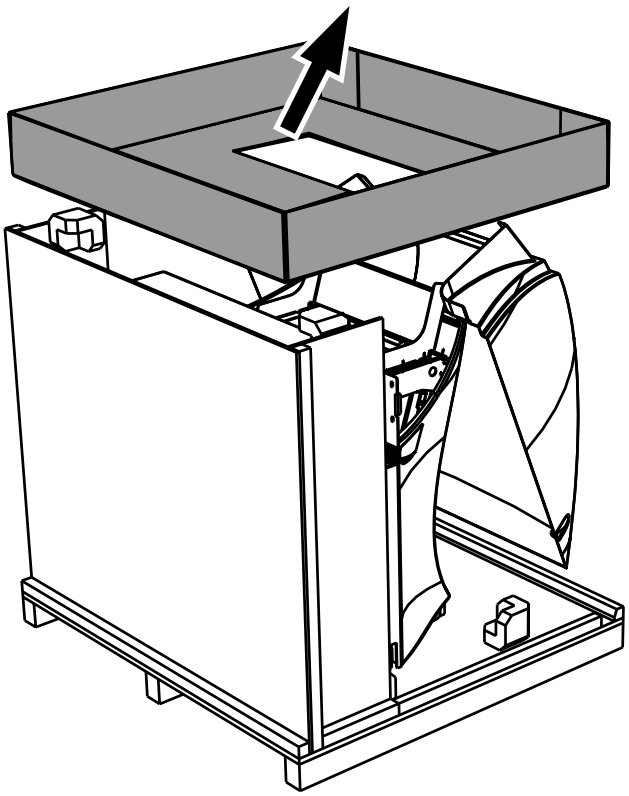


Image 3-11
Remove the Cardboard Cover

7. Take out the Rear Top Cabinet.

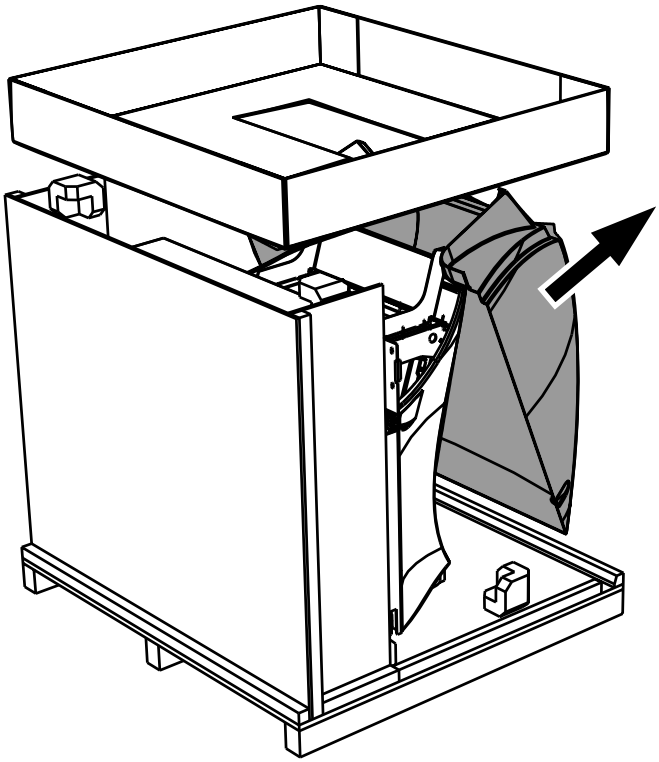


Image 3-12
Take out the Rear Top Cabinet

8. Remove the rest of the packing material.

   The i70 Trace+ Projector Unit can now be lifted out of the Crate.

3.4 Lifting the Trace Projector Unit

Necessary tools

- Nut Spinner M8
- 2 persons and the 2 Metal Bars to lift the i70 Trace+ Projector Unit

Removing the Rear Bottom Cabinet of the Trace Projector Unit.

1. Loosen the bolts connecting the Rear Bottom Cabinet to the i70 Trace+.

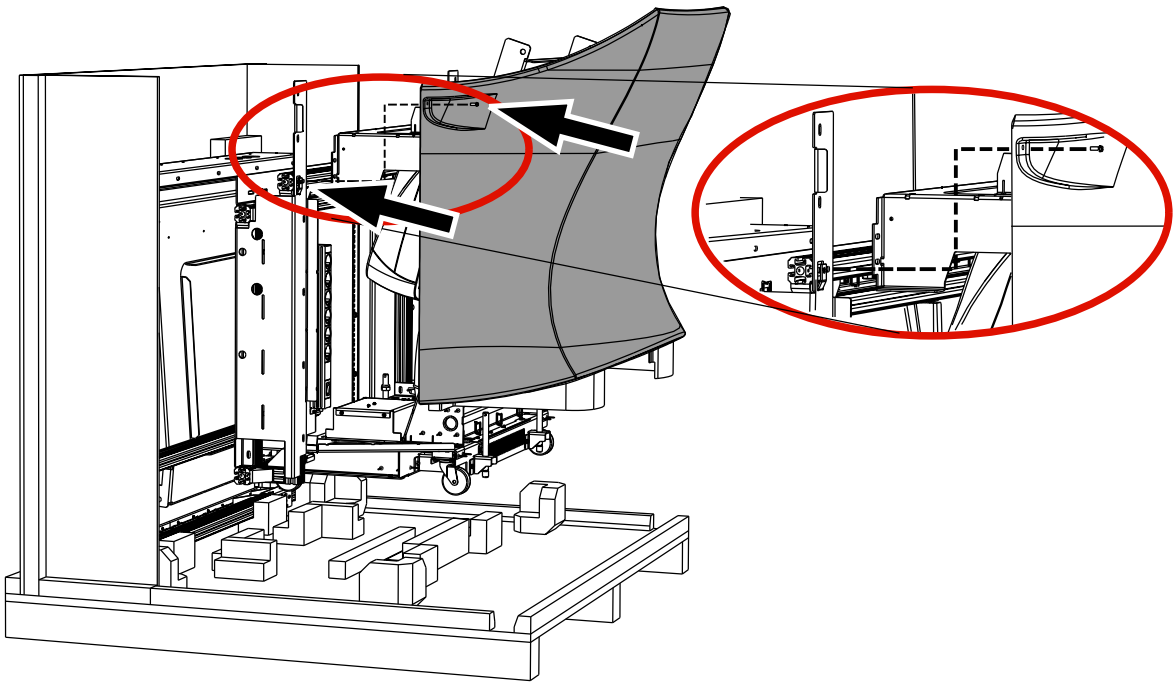


Image 3-13
Loosen the bolts connecting the Rear Bottom Cabinet.

2. Remove the Rear Bottom Cabinet.

How to Lift the Trace Projector Unit out of the Crate?

1. Slide in the 2 Metal Bars as illustrated and lift out the i70 Trace+ Projector Unit with the 2 persons.

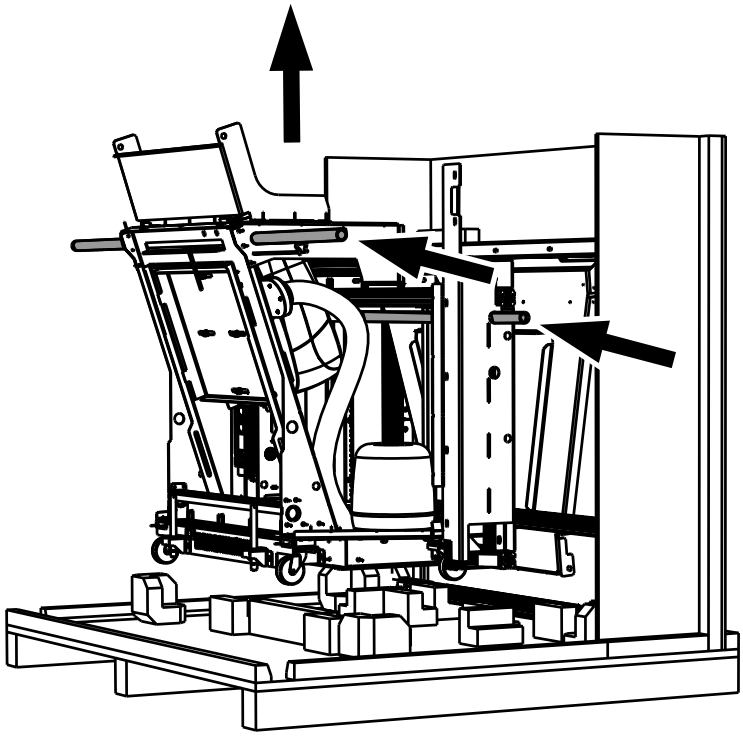


Image 3-14
Slide in the 2 Metal Bars as illustrated and lift out the i70 Trace+ Projector Unit with the 2 persons

2. When the i70 Trace+ Projector Unit is lifted outside the Crate, remove the metal bars.

3.5 Assembling the i70 Trace+

Overview

- Mounting the Trace Screen Unit onto the Trace Projector Unit
- Installing the Mirror
- Installing the Lens
- Mounting The Safety Plate

What has to be done?

1. The screen has to be mounted and fixed to the projector unit.
2. The mirror has to be folded out.
3. The mirror has to be mounted and fixed to the projector unit.

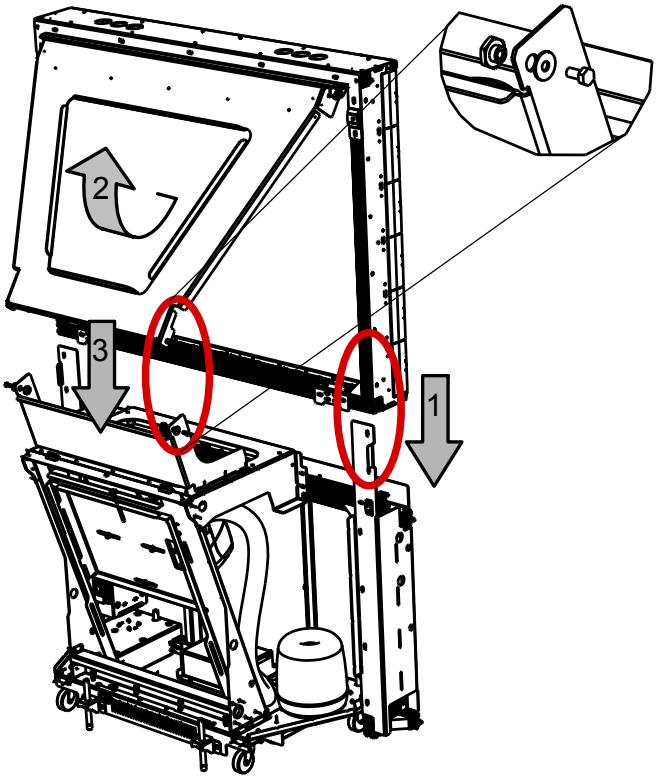


Image 3-15
The screen has to be mounted and fixed to the projector unit.

3.5.1 Mounting the Trace Screen Unit onto the Trace Projector Unit

Necessary tools

- Protective Gloves
- Nut spinner M8
- 6 T-Bolts

How to Mount the Trace Screen Unit onto the Trace Projector Unit?

1. Push on the top corners of the Front Panel until a click is heard.

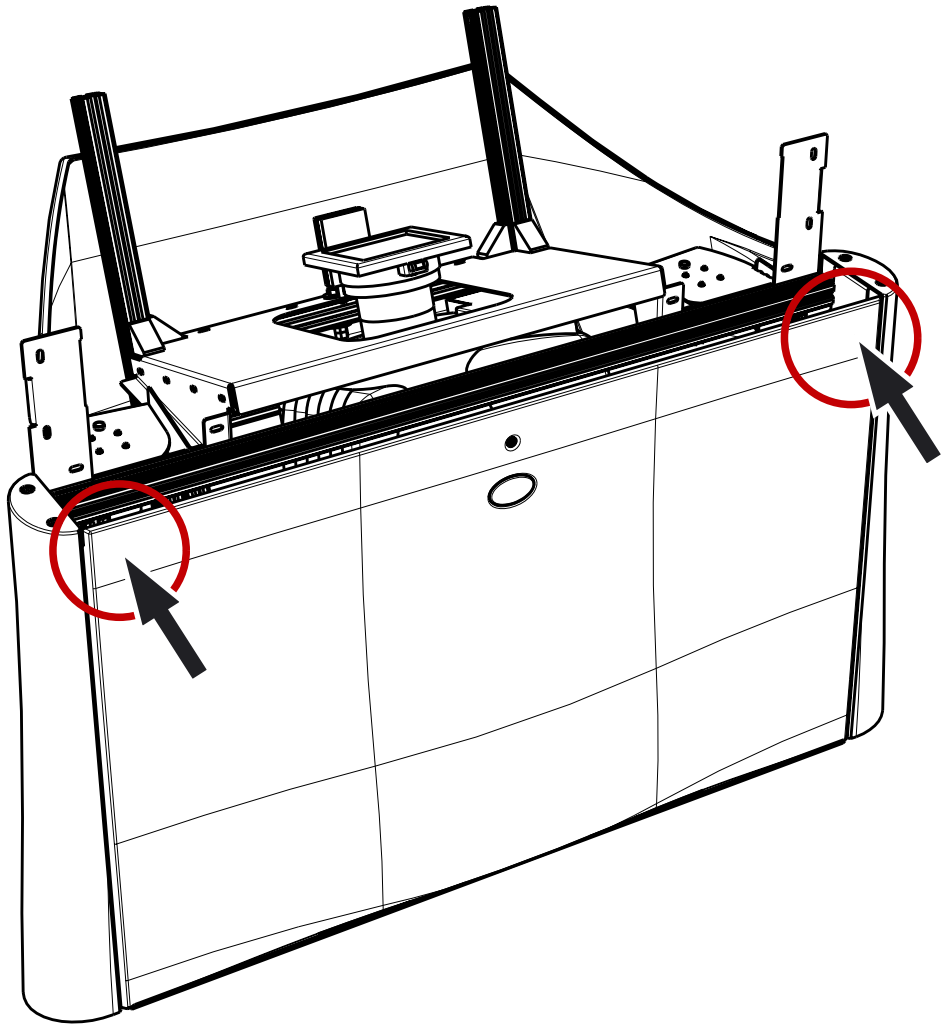


Image 3-16
Push on the top corners of the Front Panel until a click is heard

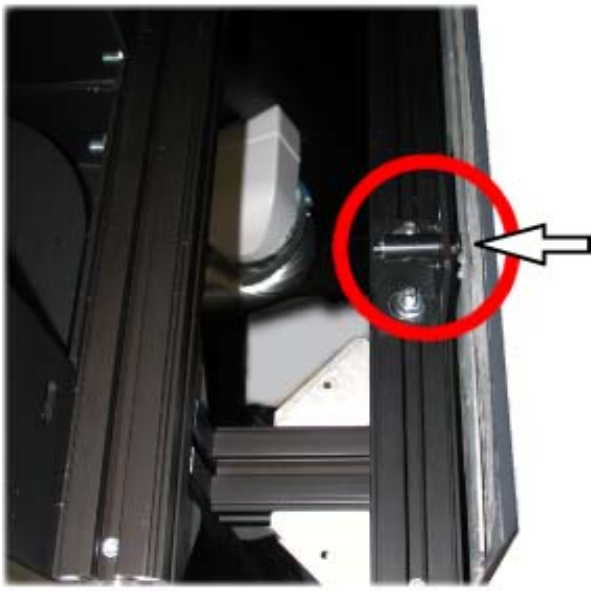


Image 3-17
Push on the top corners of the front panel untill a click is heard

2. Loosen the Front Panel.

   The Front Panel will come to front.

3. Pull off the Front Panel from its Magnet Lock and take it off completly
4. Take the Trace Screen Unit out off the Crate.
   Caution: *Don not touch the screen when handling the Trace Screen Unit, always wear protective gloves.*

   Always support the Trace Screen Unit, when putting it on the Trace Projector Unit, as indicated in the picture.

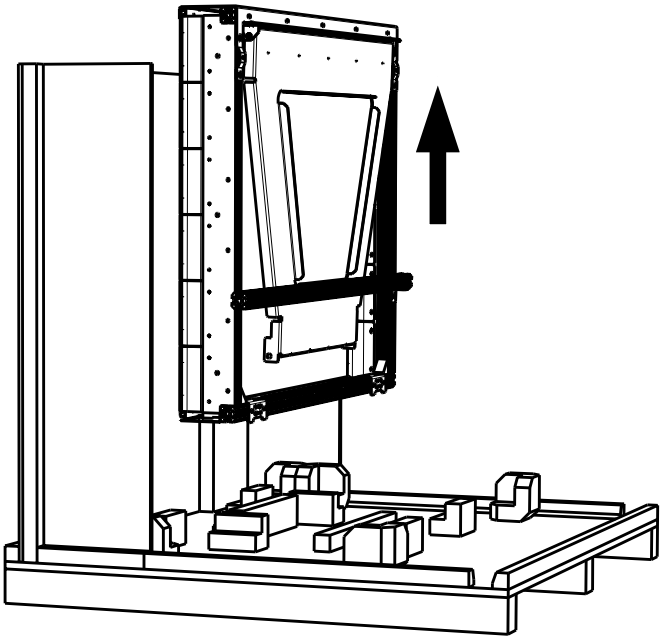


Image 3-18
Take the Trace Screen Unit out off the Crate

5. Put the Trace Screen Unit on the Trace Projector Unit.

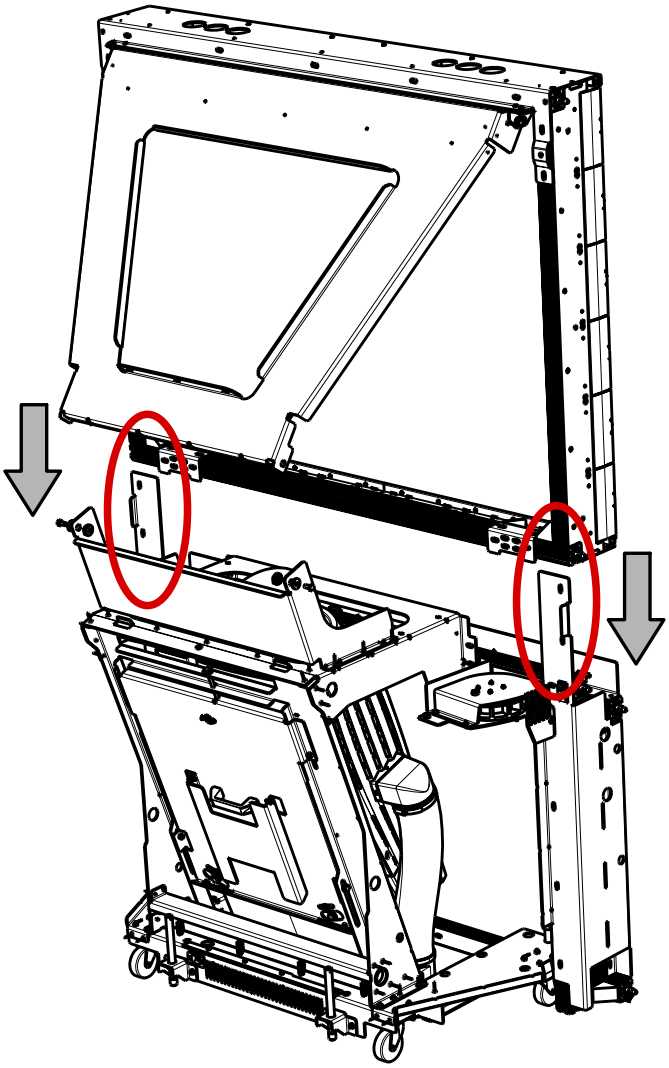


Image 3-19
Mounting the Trace Screen Unit onto the Trace Projector Unit

6. Use the T-Bolts (3 on each side) to fix the assembly.
7. Reverse step 1 to reinstall the Front Cover back on the Trace Projection Unit.

In some cases, due to transportation, the indicated spring may move and cause the screen to move from its place. Push the screen back to its place as indicated below.

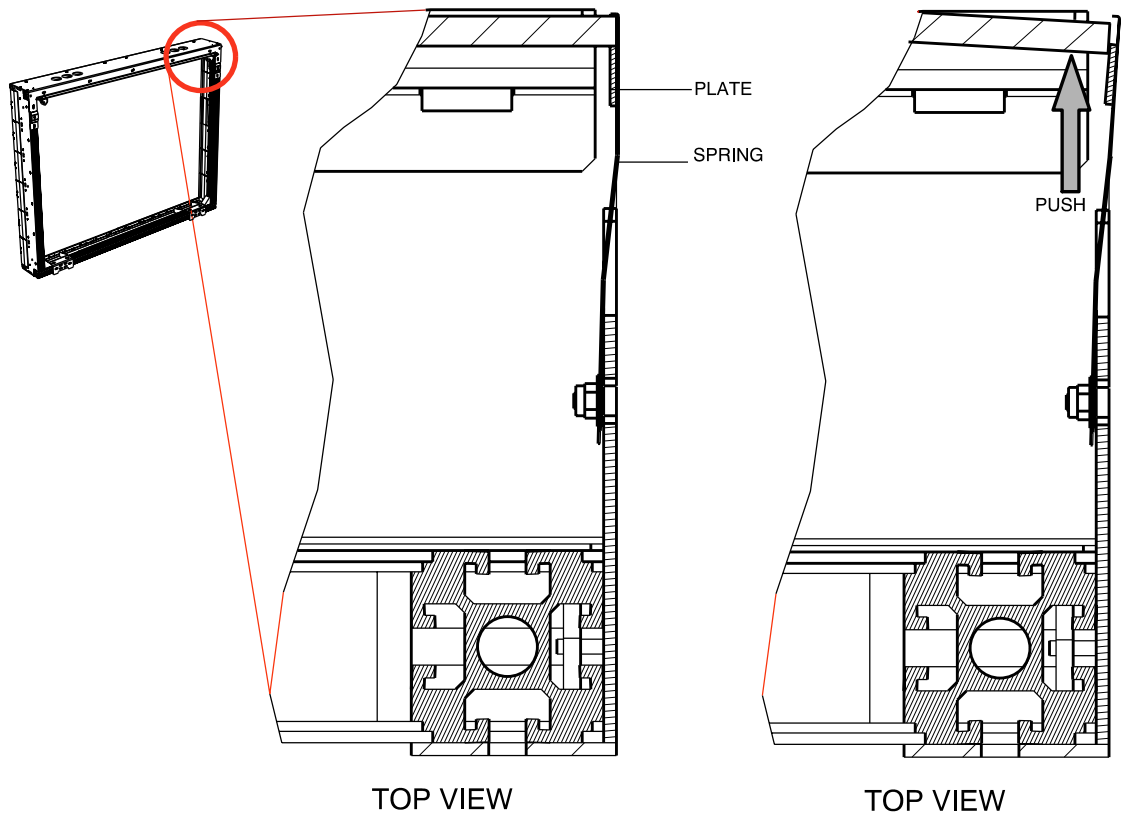


Image 3-20

3.5.2 Installing the Mirror

Necessary tools

- Nut Spinner M8
- Nut Spinner M24
- Flat Blade Screwdriver

How to install the Mirror?

1. Loosen the 4 bolts securing the Mirror Position during transportation and remove this Support.

Image 3-21
Loosen the 4 bolts securing the Mirror Position

2. Loosen the Mirror Bolts (one on each side) and remove the Mirror Bolt Holders.

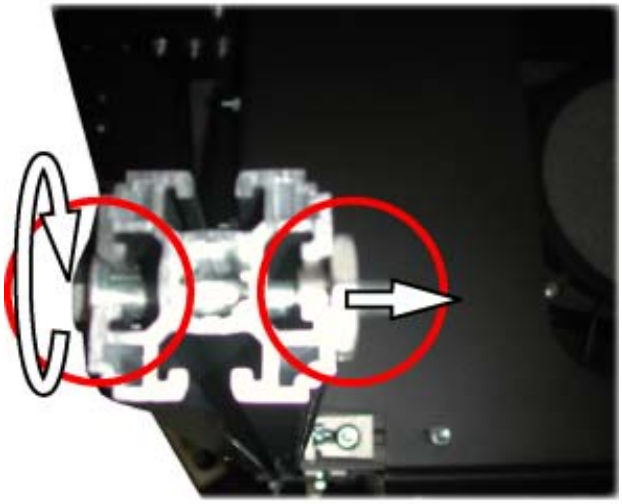


Image 3-22
Loosen the Mirror Bolts and remove the Mirror Bolt Holders

3. Rotate the Mirror in the Operation Position.

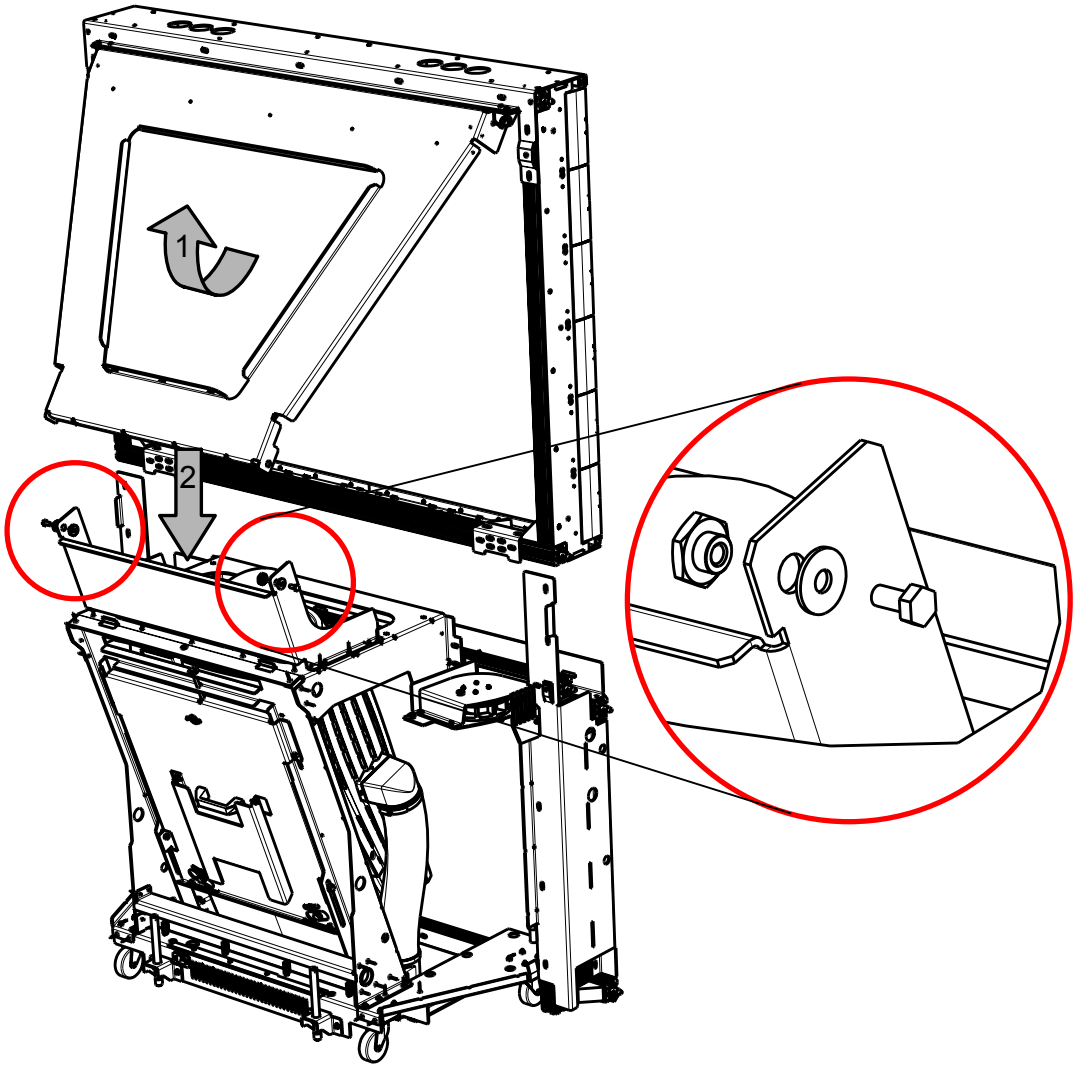


Image 3-23
Mirror Installation

4. Insert the Mirror Bolt Holders.
5. Insert and tighten the bolts to secure the Mirror's Operating Position.

3.5.3 Installing the Lens

How to install the Lens on the i70 Trace+?

Follow the next procedure:

1. Remove the foam rubber in the opening of the lens holder.
2. Take the lens assembly out of its packing material and remove the lens caps on both sides.
3. Move the handle (A) of the lens anchor system to the right.

Image 3-24
Lens installation

4. Push the lens, motors at the top, in the lens block gap horizontally, lining up the motor connector on the lens with the connector on the lens block (B), until the lens clicks in the lens anchor system.

Image 3-25
Mounted Lens

5. Secure the lens by installing the 4 extra fixation lens bolts.

Image 3-26
Secure the lens by installing the 4 extra fixation lens bolts

3.5.4 Mounting The Safety Plate

How to mount the Safety Plate?

1. Mount the safety plate by bolting it with 4 bolts (removed from the mirror) onto the bottom plate.

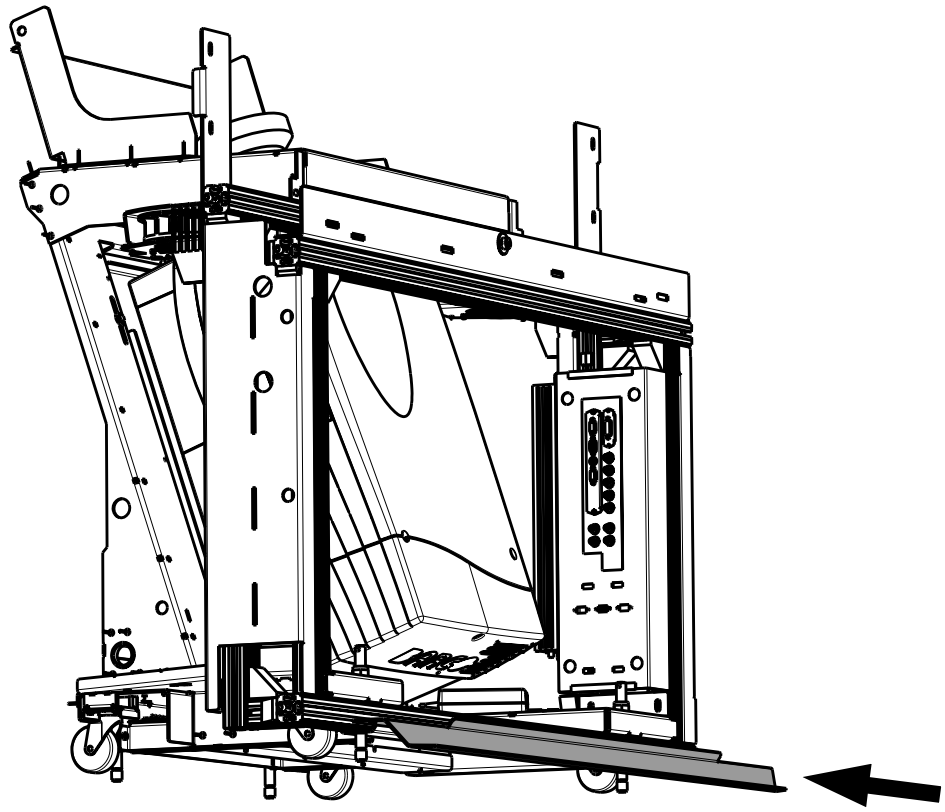


Image 3-27
Mount the safety plate by bolting it with 4 bolts (removed from the mirror) onto the bottom plate

3.6 Stabilizing the i70 Trace+

Necessary tools

Screwdriver

How to Stabilize the i70 Trace+?

1. Move the i70 Trace+ to the desired position.
2. 4 Wheels are mounted to the Frame, these allow an easy positioning of the i70 Trace+.
   Note: *These wheels are accessible from:*

   From the front, when the front panel is removed.

   From the rear, when the Rear Bottom Cabinet is removed.

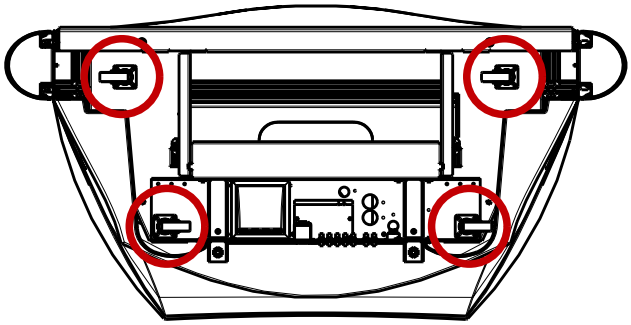


Image 3-28
4 Wheels allow an easy positioning

Caution: *Allow an easy airflow, do not obstruct the Air Outlets when positioning the i70 Trace+.*

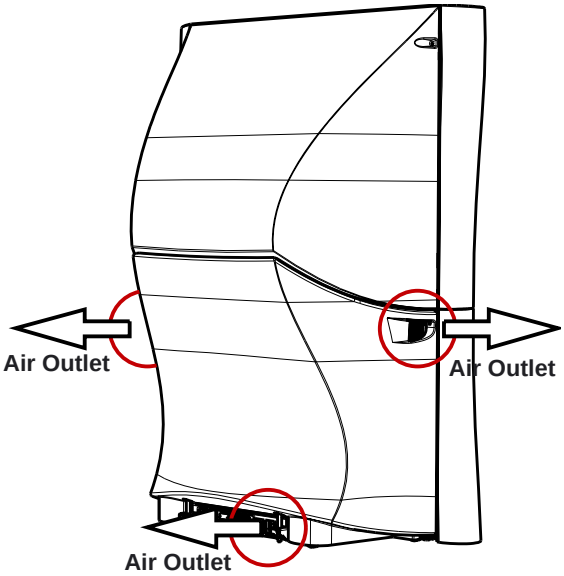


Image 3-29
Allow an easy airflow, do not obstruct the Air Outlets

3. Stabilize the i70 Trace+, insert a screwdriver in the hole and lower the 4 adjustable feet mounted to the Frame.

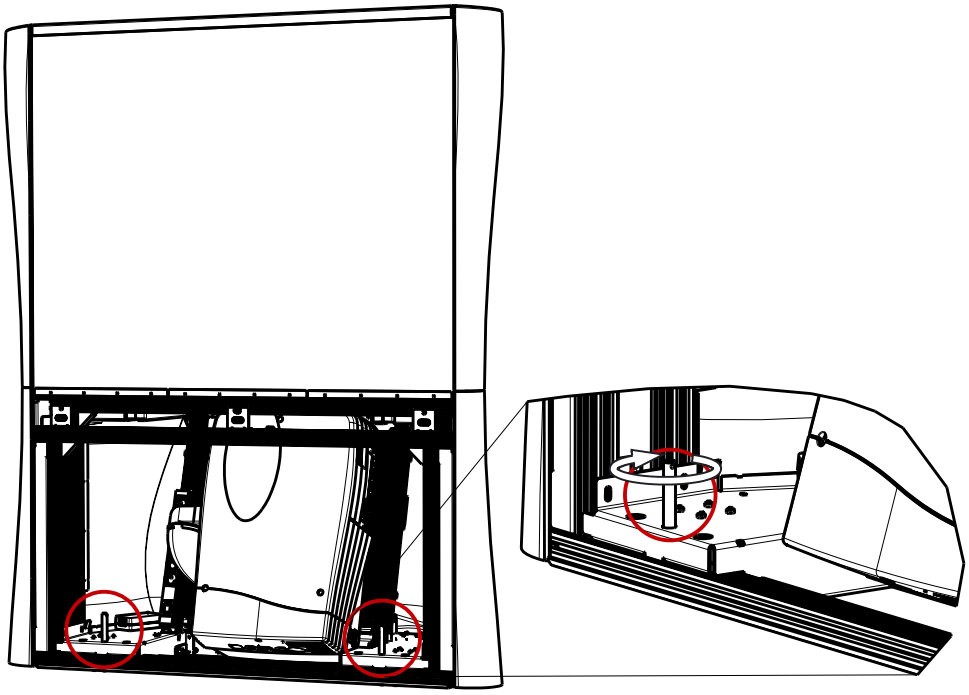


Image 3-30
Lower the 4 adjustable feet

Caution: *Do not forget to turn these feet back in the default upward position, when moving the i70 Trace+.*

3.7 Installing the Rear Cabinets

Necessary tools

- Nut spinner M8
- 4 Bolts M8

How to Install the Rear Cabinets?

1. Hook the Rear Top Cabinet onto the Stainless Steel Hook, mounted on the rear of the Trace Screen Unit.

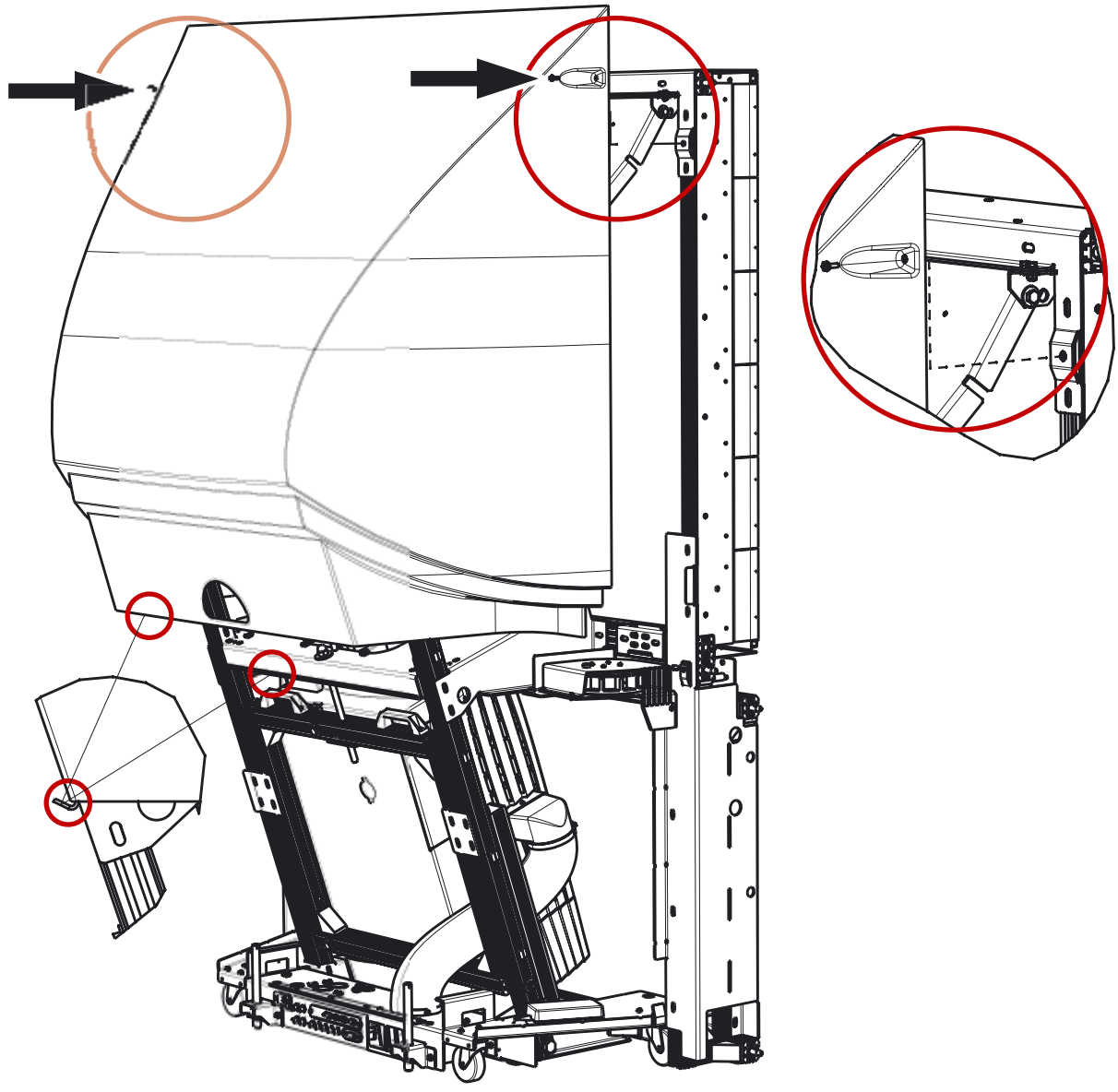


Image 3-31
Rear Top Cabinet Installation

2. Tighten the 2 bolts to install the Rear Top Cabinet to the i70 Trace+, image 3-31.
3. Hook the Rear Bottom Cabinet into the Stainless Steel Hook on the rear bottom edge of the frame.
   Caution: *Be aware of scratching the Rear Top Cabinet while hinging on the Rear Bottom Cabinet.*

   Tip: *This is done by pulling away the side corners of the Rear Bottom Cabinet from the Rear Top Cabinet while hinging in.*

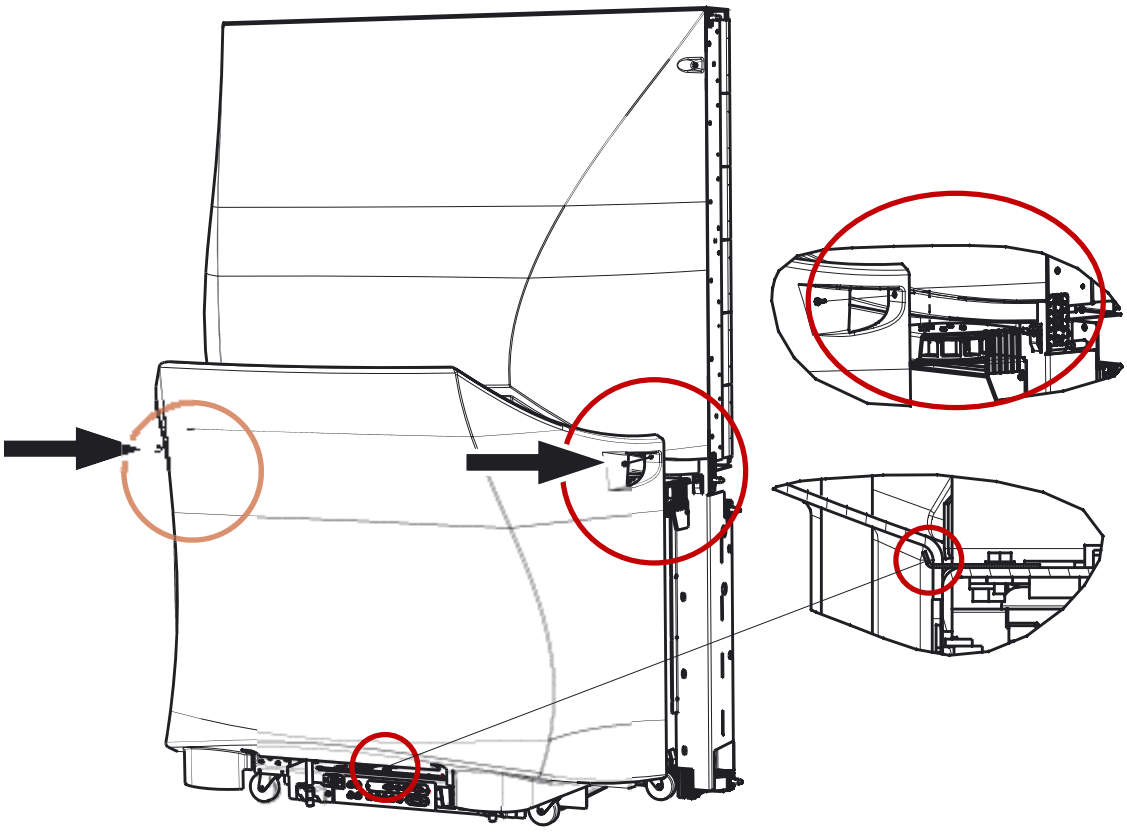


Image 3-32
Rear Bottom Cabinet Installation

4. Tighten the 2 bolts to install the Rear Bottom Cabinet to the i70 Trace+, image 3-32.

3.8 Installing the Bezels

When installing a Multi-Channel i70 Trace+ Configuration , please wait to install the Bezels and first read the Multi-Channel i70 Trace+ Installation (see "Multi-Channel Installation", page 31).

Necessary tools

- Nut spinner M5
- 2 Bolts M5

How to install the Bezels?

1. Hook in the Bottom Bezels and push down.

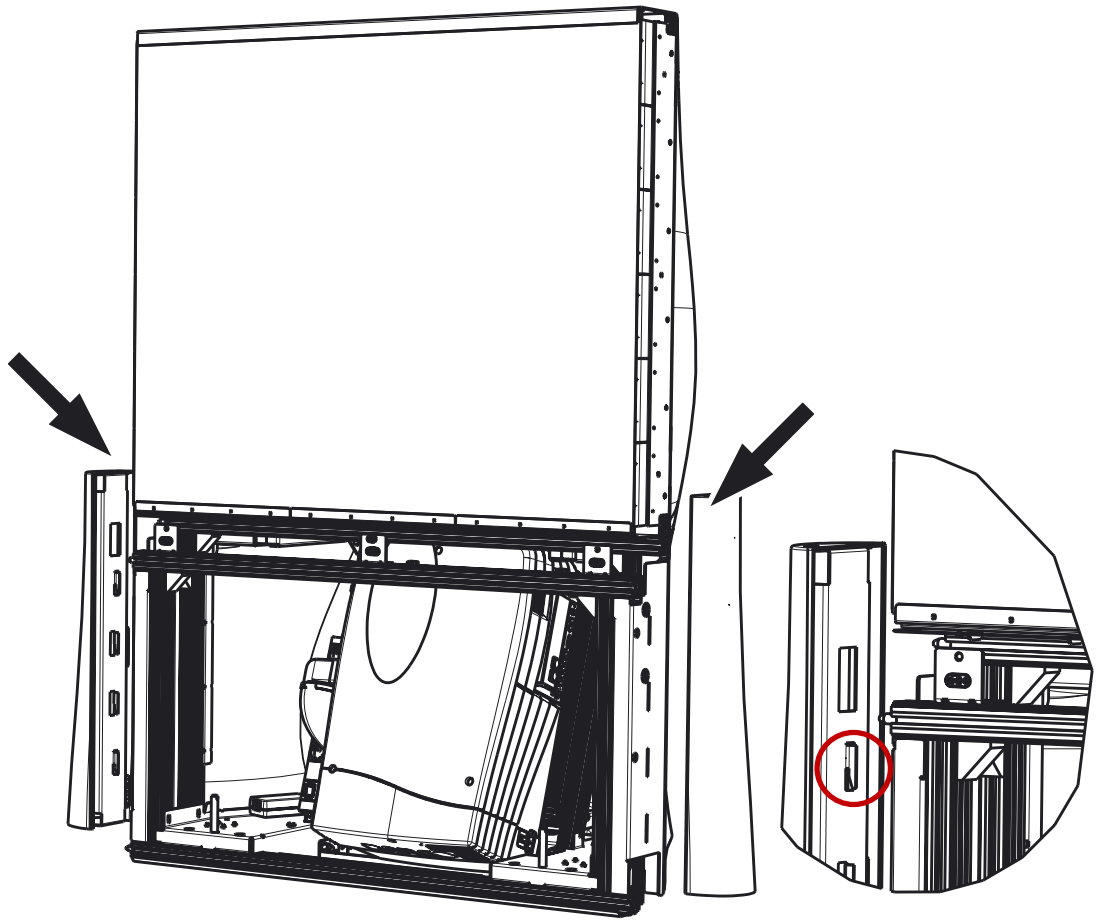


Image 3-33
Hook in the Side Bottom Covers and push down

2. Hook the Top Bezels into the Bottom Bezels.

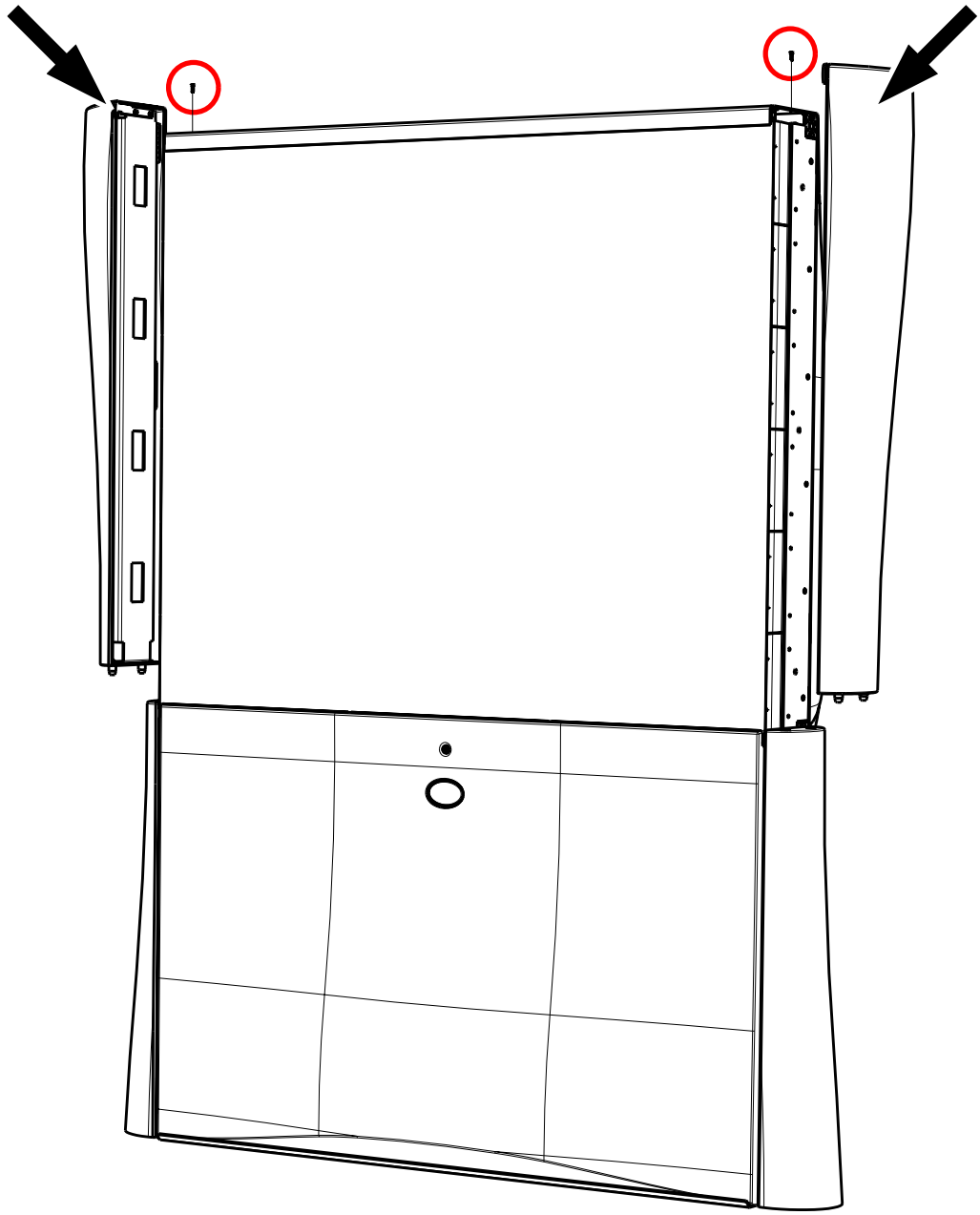


Image 3-34
Hook the Top Bezels into the Bottom Bezels

3. Insert and tighten the 2 blots (one on each side) on top of the i70 Trace+ to fix the Bezels.

4. MULTI-CHANNEL INSTALLATION

When setting up a Multi-Channel i70 Trace+ Configuration, first start with the Single-Channel Installation Procedures until mounting the Bezels (see "Single-Channel Installation", page 9), then return to this Multi-Channel i70 Trace+ Installation.

The i70 Trace+ is fully scalable from a Single-Channel to a Multi-Channel Configuration, this chapter will describe how to install a Multi-Channel i70 Trace+ Configuration.

Overview

- Possible Multi-Channel Configurations
- Multi-Channel Set Up

4.1 Possible Multi-Channel Configurations

The i70 Trace+ is fully scalable from a Single-Channel to a Multi-Channel Configuration, this chapter will describe some Configurations with 2 and 3 i70 Trace+ Units involved.

Possible Dual Channel Configurations

The following illustration shows some examples of a Dual Channel Configuration:

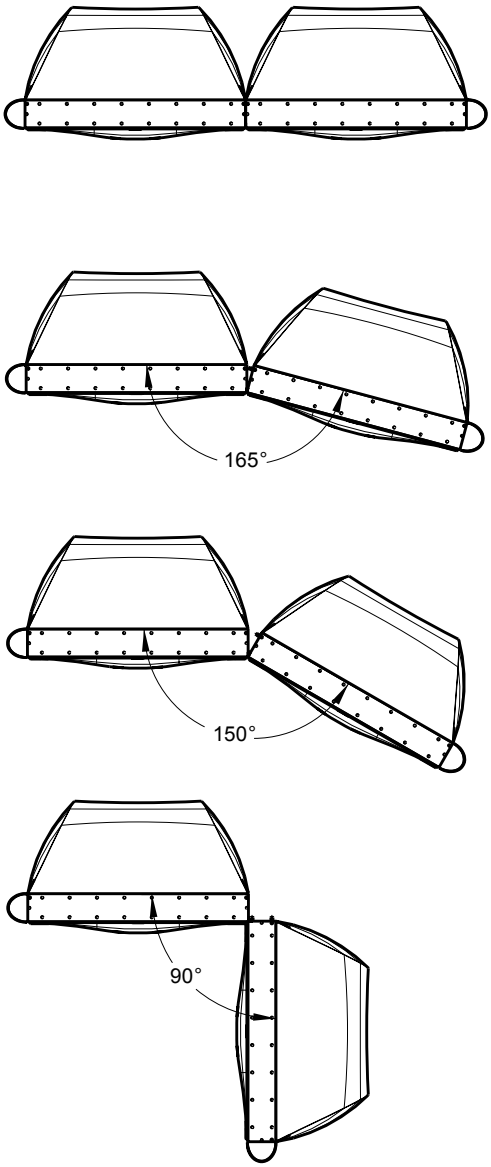


Image 4-1
Possible Dual Channel Configurations

Possible Triple Channel Configurations

The following illustration shows some examples of a Triple Channel Configuration:

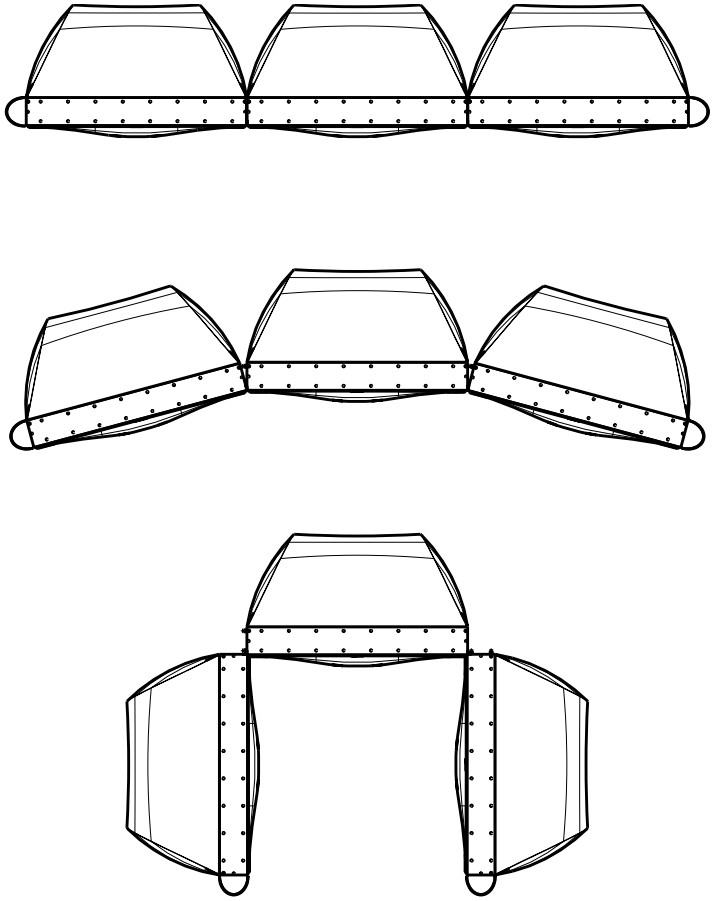


Image 4-2
Possible Triple Channel Configurations

4.2 Multi-Channel Set Up

How to Set Up a Multi-Channel Configuration?

1. When applicable use the locking pins on the side of the i70 Trace+ to join multiple units together.

Image 4-3
Locking Pins

2. Mount the Bezels on the outside of the Multi-Channel Configuration (see "Installing the Bezels", page 28).

5. SINGLE-CHANNEL CONNECTIONS

The following procedures will describe the connections when installing a single i70 Trace+.

Overview

- Connections Location
- Connections Overview
- Power Cord Connection
- Operating the i70 Trace+
- Input Connections
- Communication Connections
- Stereo Connection

5.1 Connections Location

Where to find the Connections?

The input panel and the power strip are located in the right bottom part of the unit, they are accessible from the front of the unit by removing the front panel.

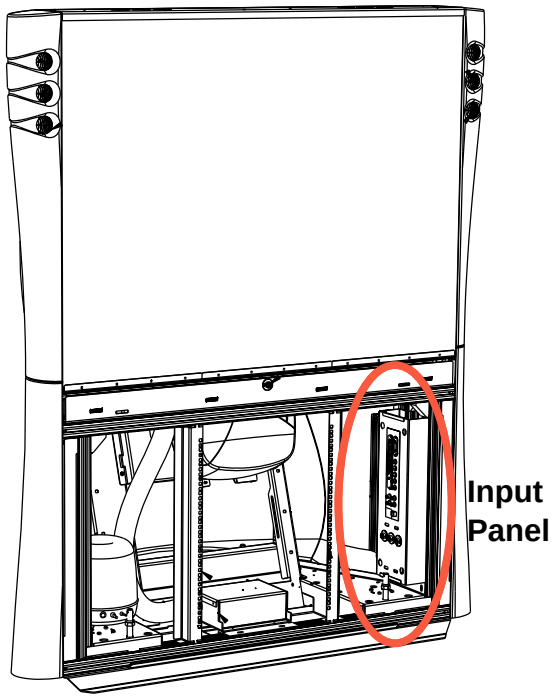


Image 5-1
Patch-Panel Location

Description of the Connection Section

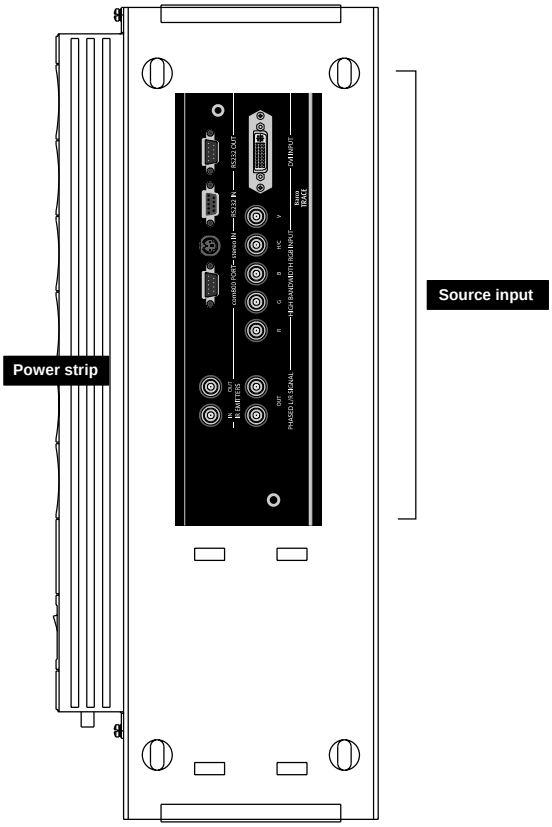


Image 5-2
Connection Section Description

The Power Strip

The power strip is used to connect the projector, free plugs can be used to connect additional equipment.

WARNING: The maximum allowed “additional” power is 300W! When connecting extra apparatuses always insure not to exceed the maximum allowed power (300W).

5.2 Connections Overview

Connections Overview

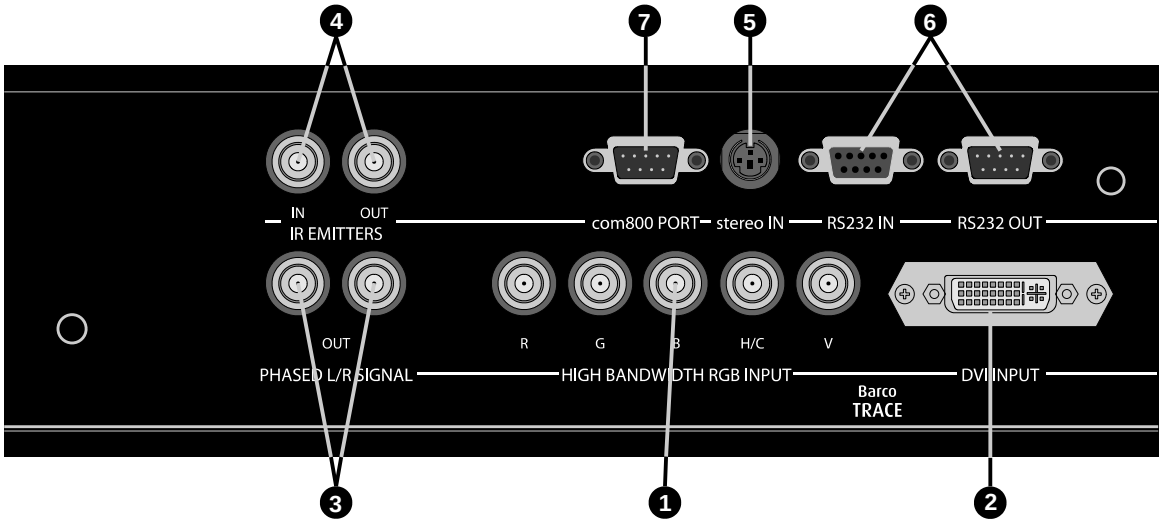


Image 5-3
Connections overview

1	5–BNC Cable Input
2	DVI Input
3	Phased L/R Signal Connections
4	IR Emitters Connections
5	Stereo In Input
6	RS232 Communication Connections
7	Com. 800 Peripherals Connection

For more information on the Multi-Channel Stereo Related Signals (Phased L/R Signal Connections and IR Emitters Connections) see "Multi-Channel Stereo Connections", page 51.

5.3 Power Cord Connection

Power Cord Connection

The power input is auto-ranging from 90 to 240 VAC. Use the supplied Power Cord to connect the i70 Trace+ to the wall outlet. Plug the female power connector into the male connector at the rear bottom of the i70 Trace+.

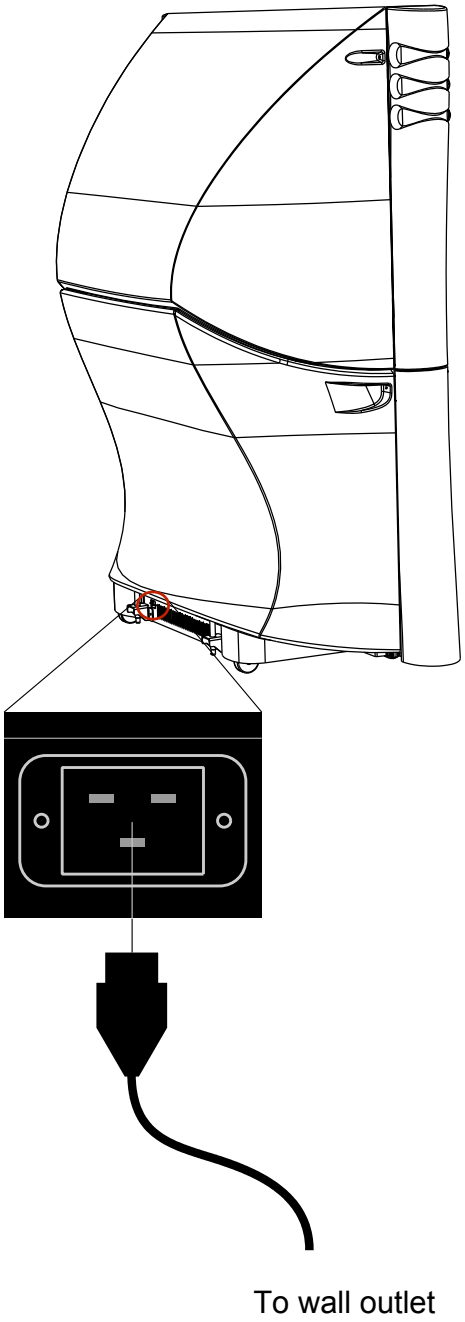


Image 5-4
Power Cord Connection

5.4 Operating the i70 Trace+

Overview

- Switching On
- Switching to Standby
- Switching Off

5.4.1 Switching On

How to Switch to Standby?

The i70 Trace+ will Start Up to Standby automatically when inserting the Power Cord.

How to Start Image Projection?

1. Press the **Standby** key on the RCU.

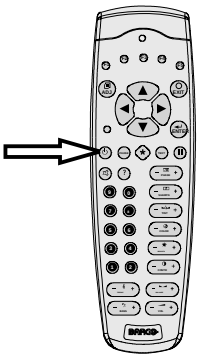


Image 5-5
Standby key on the RCU

Tip: *Point the RCU towards the i70 Trace+ Screen.*

Note: *For more information on how to use the RCU see chapter 'Getting Started' of the Owner's Manual.*

The IR Communication Led on the RCU will light up (for more information see chapter 'Getting Started' of the Owner's Manual).

The i70 Trace+ Status Led will Light Up Green and Image Projection will be started.

5.4.2 Switching to Standby

How to Switch to Standby?

1. Press the Standby key to switch the i70 Trace+ to standby.

5.4.3 Switching Off

How to Switch Off?

1. Unplug the Power Cord from the Wall Outlet.

5.5 Input Connections

Overview

- Source Connections

5.5.1 Source Connections

Source Connection Specifications ?

- The Input has a 5 BNC input terminals for 5 cable input and a DVI plug for DVI input.
- Within the installation mode it is possible to setup the input for 5 cable or DVI (See Owner's Manual).
- Composite video and super video signals can be connected when an optional decoder is installed.

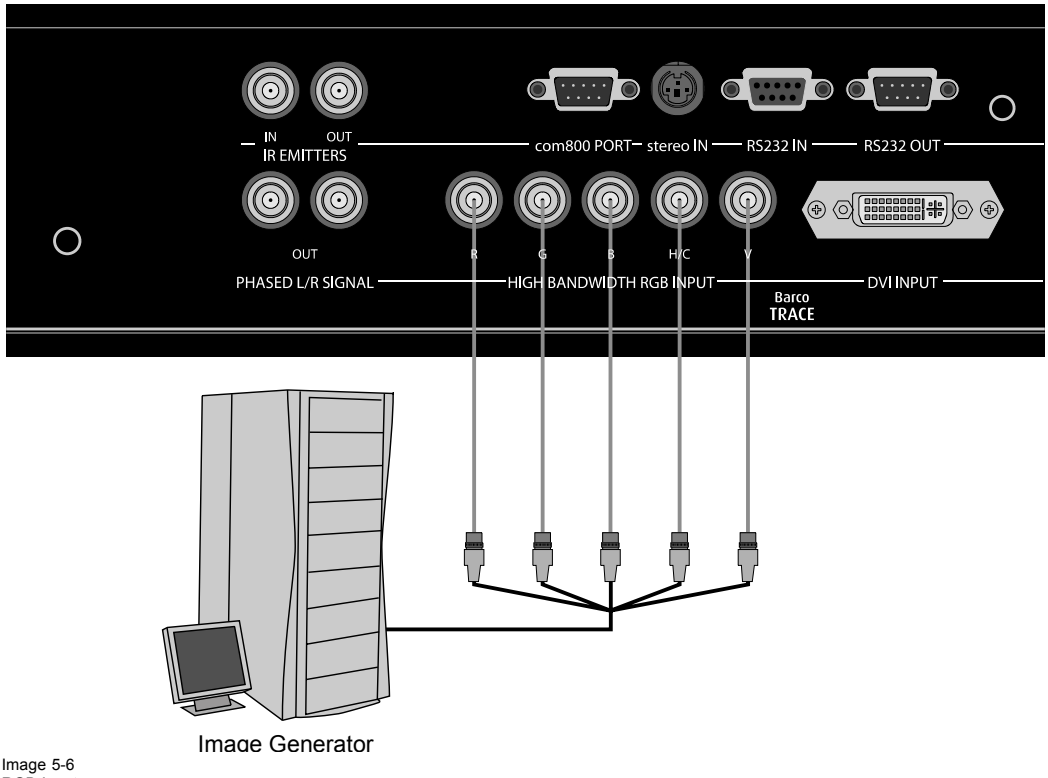


Image 5-6
RGB Input

Which signals can be connected to the Source Connection?

Connector name/ Input signal	R	G	B	H	V
RGBHV	R	G	B	H	V
RGBS	R	G	B	S	-
RGsB	R	Gs	B	-	-

DVI signals can be connected to the DVI input connector.

Pin assignment for the DVI connector

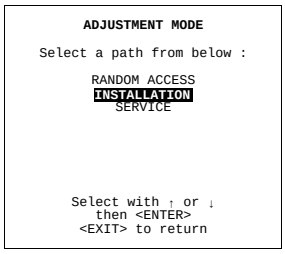
Pin 1	TMDS DATA2-	Pin 13	TMDS DATA3+
Pin 2	TMDS DATA2+	Pin 14	+5 Power
Pin 3	TMDS DATA2/4 Shield	Pin 15	Ground (for +5V)
Pin 4	TMDS DATA4-	Pin 16	Hot Plug Detect
Pin 5	TMDS DATA4+	Pin 17	TMDS DATA0-
Pin 6	DDC Clock	Pin 18	TMDS DATA0+
Pin 7	DDC Data	Pin 19	TMDS DATA0/5 Shield
Pin 8	No connect	Pin 20	TMDS DATA5-
Pin 9	TMDS DATA1-	Pin 21	TMDS DATA5+
Pin 10	TMDS DATA1+	Pin 22	TMDS Clock Shield
Pin 11	TMDS DATA1/3 Shield	Pin 23	TMDS Clock+
Pin 12	TMDS DATA3-	Pin 24	TMDS Clock-

How to select the Source Connection?

1. Key in **1** on the RCU.

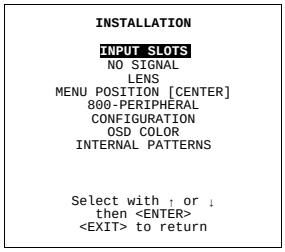
How to change the Source Connection (Input 1) setting?

1. Press **ADJUST** or **ENTER** key to start up the Adjustment mode.
2. Push the cursor key ↑ or ↓ to select *Installation*.



Menu 5-1

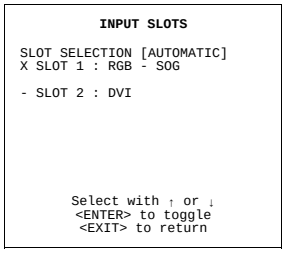
3. Press **ENTER**.
4. Press the cursor key ↑ or ↓ to select *Input Slots*.



Menu 5-2

5. Press **ENTER**.

   The internal system will scan the inputs and displays the result in the *Input Slots* menu.



Menu 5-3

6. Push the cursor key ↑ or ↓ to select the first or second slot.

Possible indications on input slot menu

- Input 1:
  - RGS-SS [CV or HS&VS] = RGB analog signals, separate sync is composite sync or horizontal and vertical sync.
  - RGB-SOG = RGB analog signals, sync on green is composite sync
- Input 2:
  - DVI

5.6 Communication Connections

5.6.1 RS232 Connection

What is possible with the RS232 Connection?

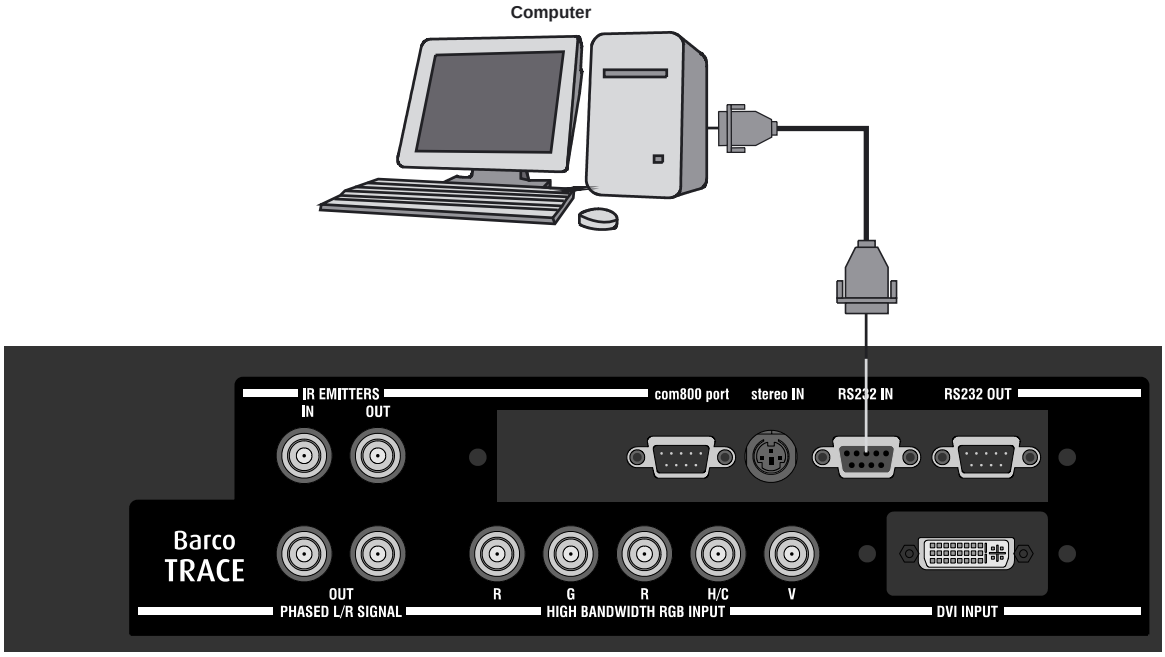


Image 5-7
RS232 Connection

- Remote Control:
  - Easy adjustment of the i70 Trace+ when connected to an computer.
  - Allow storage of multiple i70 Trace+ configurations and set ups.
  - Wide range of control possibilities.
  - Address range from 0 to 255.
- Data Communications: Sending data to the i70 Trace+ or copying the data from the i70 Trace+ to a memory device connected to the computer.

Communication Port

This port allows communication with Barco Peripherals (Switchers, ...).

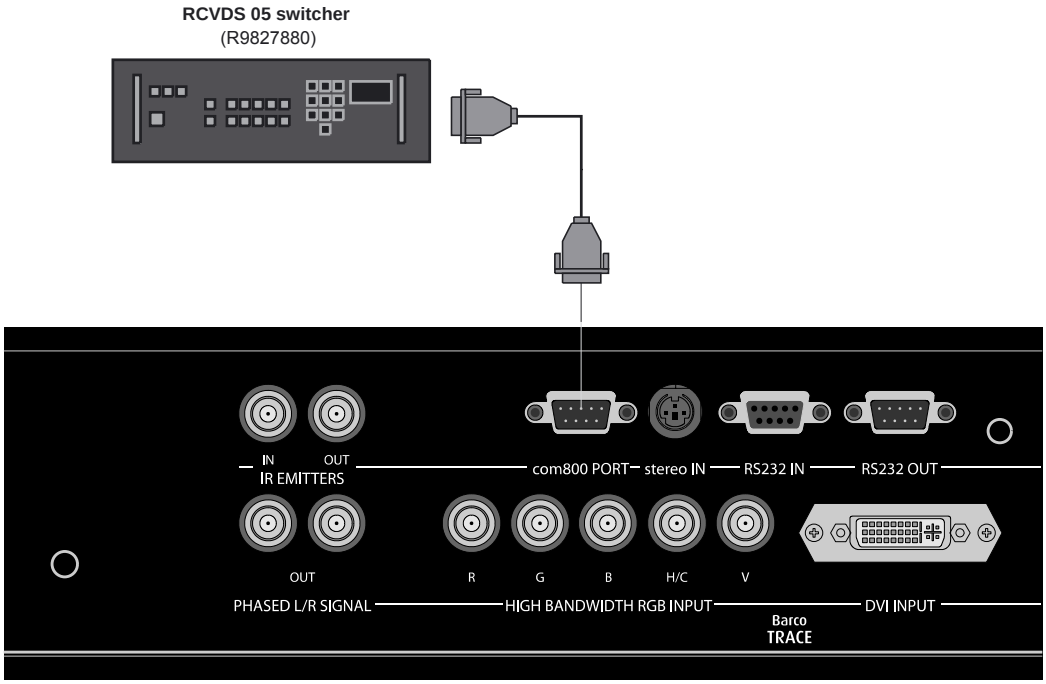


Image 5-8
Communication Port

What is possible when connecting Barco's RCVDS05?

- Up to 20 inputs with Barco's RCVDS 05 switcher (**R9827880**) and 90 inputs when RCVDS's are linked via the expansion module.
- Serial communication with the projector.
- Remote control buttons on the RCVDS to control the projector (source selection and analog settings).
- The selected source number will be displayed on a 2 digit display and the selected input module will be indicated with a LED on the rear.

For more information about the use of the RCVDS05 switcher (R9827880), consult the owner's manual of the RCVDS05.

Connecting an IR Remote Receiver to the projector

This infrared receiver unit makes it possible to control the projector from another room. There is a communication line cable between the IR receiver and the projector or the RCVDS. The control information from the RCU can now be sent to the IR Remote Receiver.

The IR Remote Receiver displays the selected source on a 7-segment display.

5.7 Stereo Connection

How to Connect the Stereo Sync Signal?

The Stereo Sync Signal coming from the IG is connected to the Stereo In Mini DIN input on the Patch-Panel of the i70 Trace+.

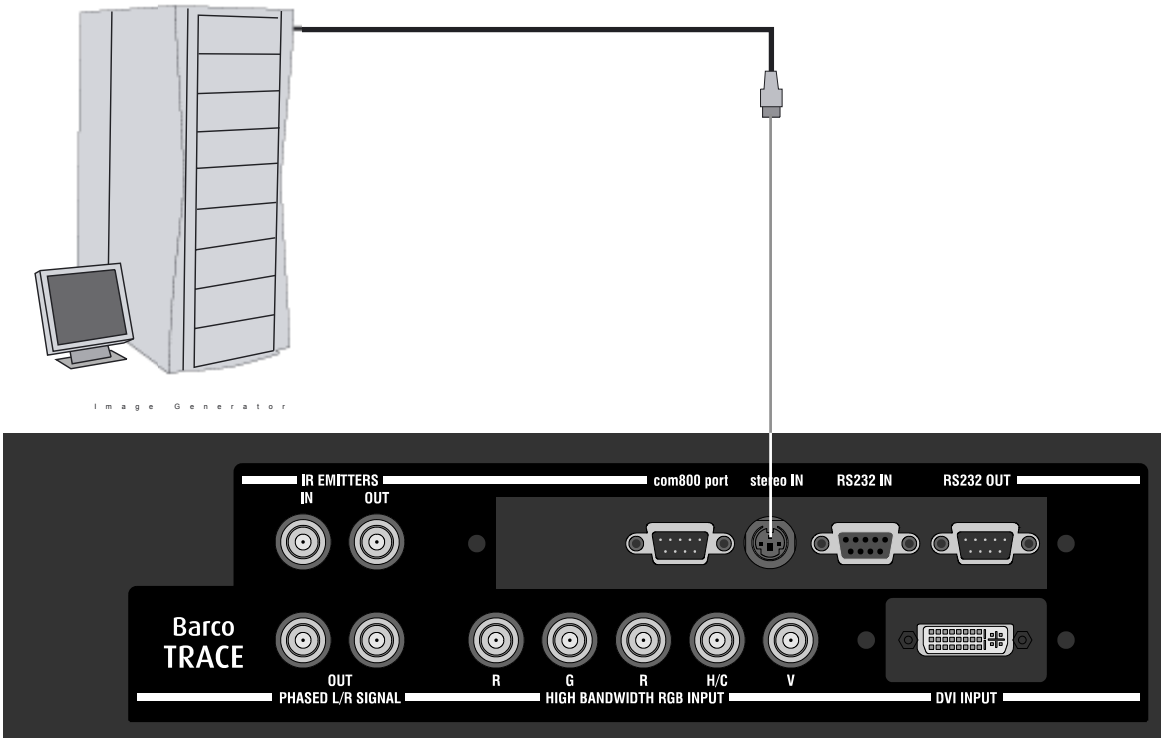


Image 5-9
Stereo Sync Connection

6. MULTI-CHANNEL CONNECTIONS

Overview

- Multi-Channel Power Cord Connections
- Multi-Channel Input Connections
- Multi Channel Linked System Connections
- Multi-Channel Stereo Connections

For more detailed information on the connections location see "Connections Location", page 35, the connections overview see "Connections Overview", page 37 or the communication connections see "Stereo Connection", page 43.

6.1 Multi-Channel Power Cord Connections

For more detailed information on Power Cords see "Power Cord Connection", page 37.

WARNING: Always use a Power Circuit that supports the necessary Current and Power Requirements for the complete Multi-Channel Configuration.

Power Consumption Specifications

This product should be operated from an AC power source. Each i70 Trace+ needs 12A/100V, 5A/240V. Check if the mains voltage and ampacity matches the projectors electrical ratings and ensure that the mains power system can support the i70 Trace+ power requirements: 1200 Watts for each Barco Trace Unit.

How to connect the Power Cords in a Multi-Channel Configuration?

1. Use the supplied power cords to connect the i70 Trace+ Units to the wall outlet or connect them to a power strip.

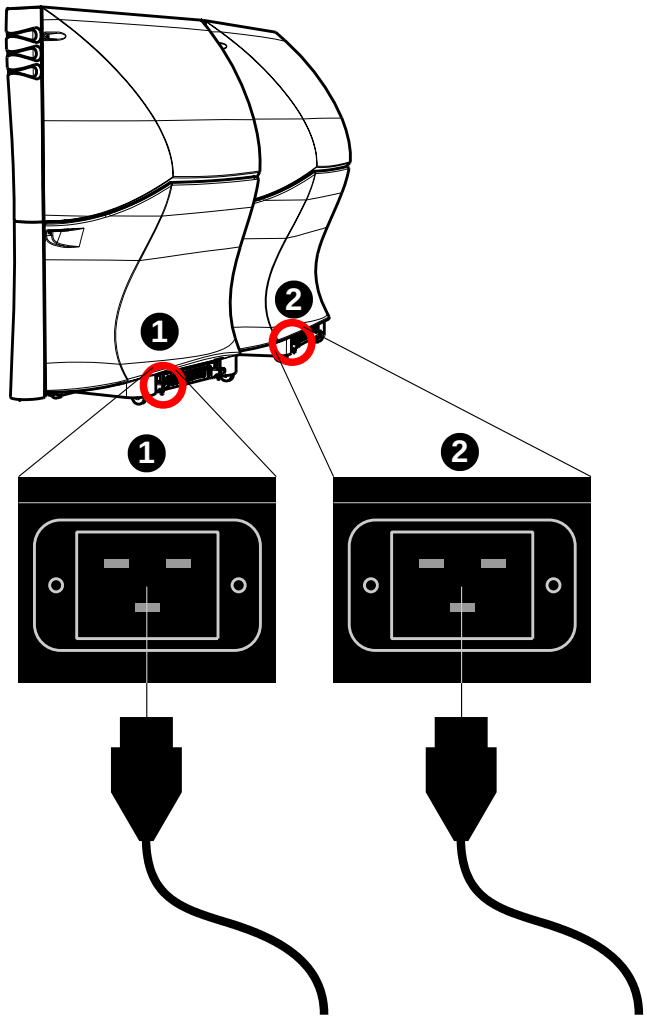


Image 6-1
Multi-Channel Power Cord Connections

Warning: *When using a power strip ensure the power strip cable supports the necessary current and power requirements for the complete system.*

6.2 Multi-Channel Input Connections

For more detailed info on the Input Connection see "Input Connections", page 39.

How to connect the Source Input in a Multi-Channel Configuration?

1. Connect the Source Signal coming from the Multi-Channel IG to the Multi-Channel i70 Trace+ Configuration.

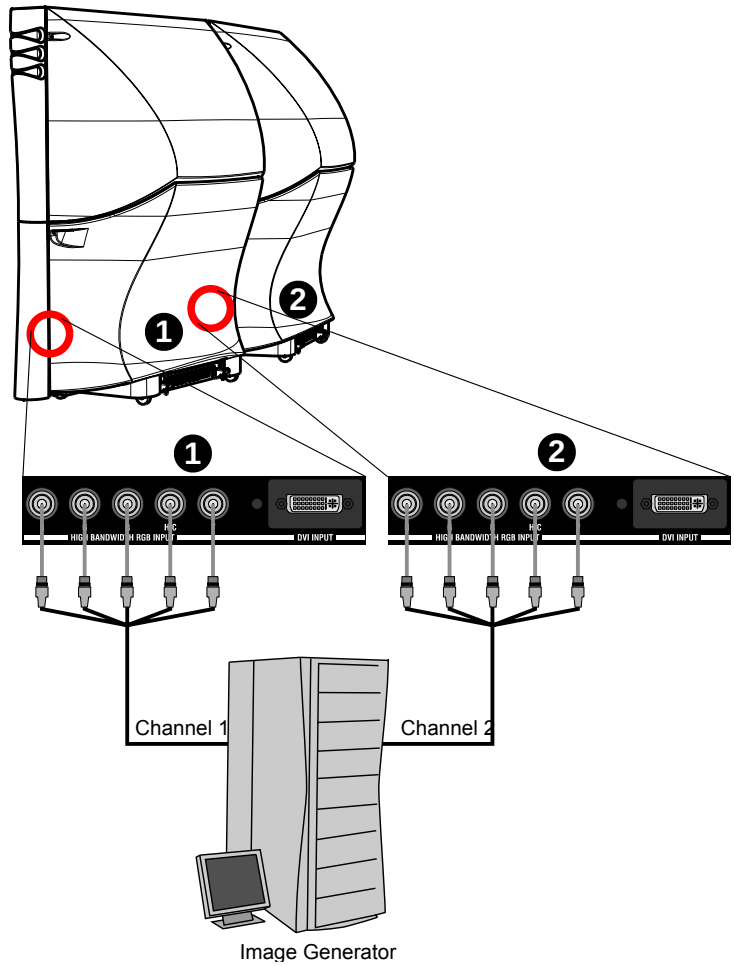


Image 6-2
Multi-Channel RGB Input Connections

6.3 Multi Channel Linked System Connections

CAUTION: Always use the Barco COM 800 Splitter, R9827941 (240V) or R9827948 (110V), when using the COM 800 protocol.

What can be done?

In a complex multi-channel setup, projectors can be controlled using the RS232 or COM800 Protocol.

CLO and Dynacolor™ can be controlled by both protocols, however by using the COM800 port for these 2 adjustments, the RS232 Port can still be used for general RS232 commands.

The following procedures will describe how to connect a RS232 Linked System and a COM800 Linked System.

How to connect a RS232 Setup?

1. Connect a Null Modem connector to the RS232 Input of the master–projector.

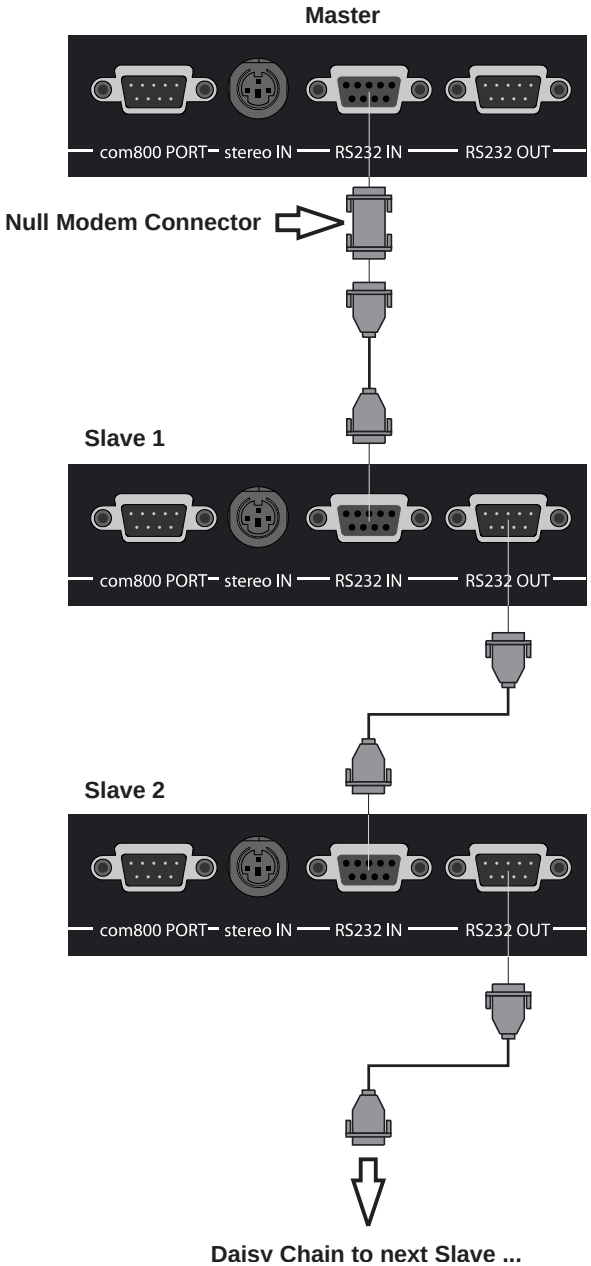


Image 6-3
RS232 Setup

2. Connect the output of the Null Modem connector to the RS232 Input of the first slave–projector (image 6-3).
3. Continue by connecting the RS232 Output of the first slave-projector to the RS232 Input of the second slave–projector (image 6-3).
4. Continue this daisy chain connection to connect all slave–projectors (image 6-3).

How to connect a COM800 Setup

Always use the Barco COM 800 Splitter (**R9827941**) when using the COM 800 protocol.

1. Use a data cable with at least 9 cores and 2 DB9 female connectors, just cross the pin 2 and pin 3 connection to make a Custom Null Modem Cable.

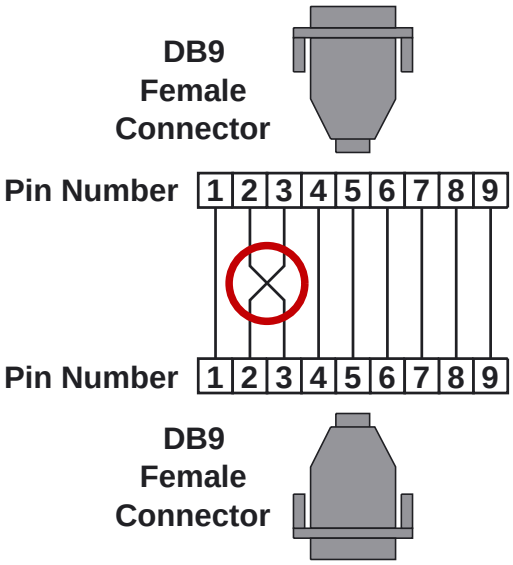


Image 6-4
Make a Custom Null Modem Cable

2. Use the Custom Null Modem Cable to connect the COM 800 port of the master-projector to the 'To Switcher' port on the frontside of the COM 800 Splitter.

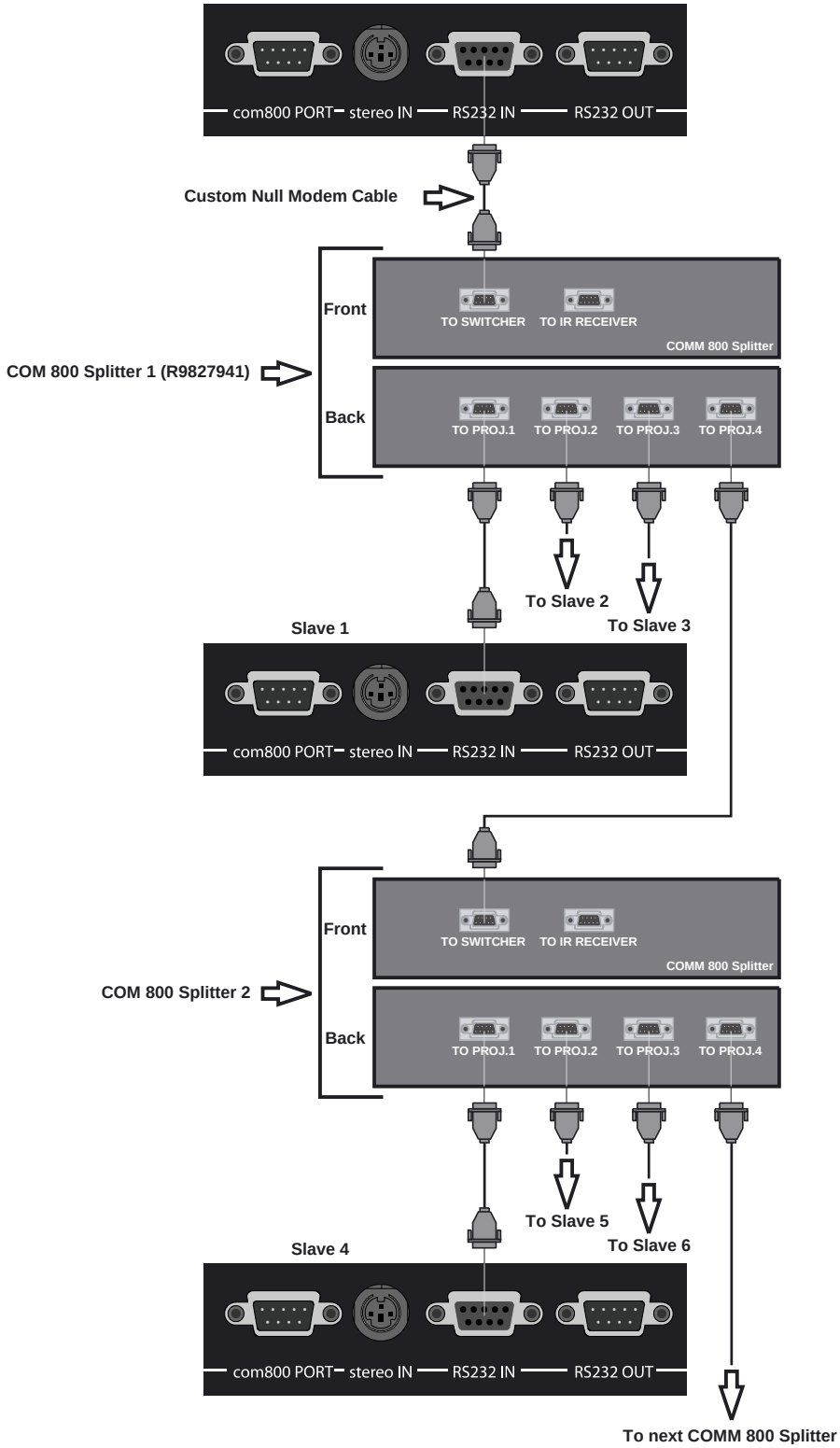


Image 6-5
Com 800 Connection

3. Continue by connecting the slave projectors to the 'To Proj.' connectors on the backside of the COM 800 Splitter (image 6-5).
4. When dealing with more than 4 slave projectors, the 'To Proj.' connectors on the backside of the COM 800 Splitter can also be used to connect extra COM 800 Splitters (image 6-5).

6.4 Multi-Channel Stereo Connections

How to Set Up the Stereo Parameters?

The Transport Delay Setting must be the same on all Projectors.

The L/R Phase must be same on all projectors, first adjust the L/R phase on the projector where the IR Emitter signal comes from, then put the same value on the other projectors as well.

For more detailed information on how to adjust these parameters please consult the Owner's Manual.

How to connect the Stereo Sync Signal in a Multi-Channel Configuration?

The Stereo Sync Signal coming from the IG is connected to the Stereo In Mini DIN input on the Patch-Panel of all the i70 Trace+ Units of the Multi-Channel Configuration.

On some IG's, the Stereo Sync is already present in the Vertical Sync Signal.

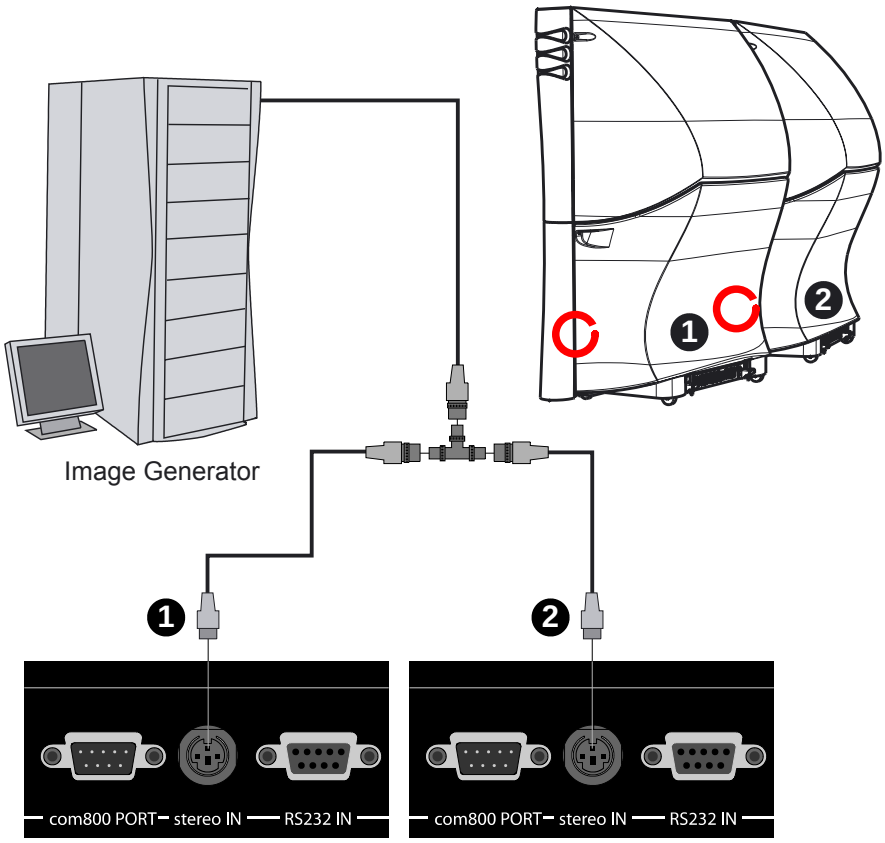


Image 6-6
Multi-Channel Stereo Sync Connections

How to connect the Stereo Emitter Signal in a Multi-Channel Configuration?

The Stereo Emitter Signal is 'Looped Through' all the i70 Trace+ Units of the Multi-Channel Configuration.

1. Connect the 'IR Emitters Out' BNC Connector of the first i70 Trace+ to the 'IR Emitters In' BNC Connector of the second i70 Trace+.

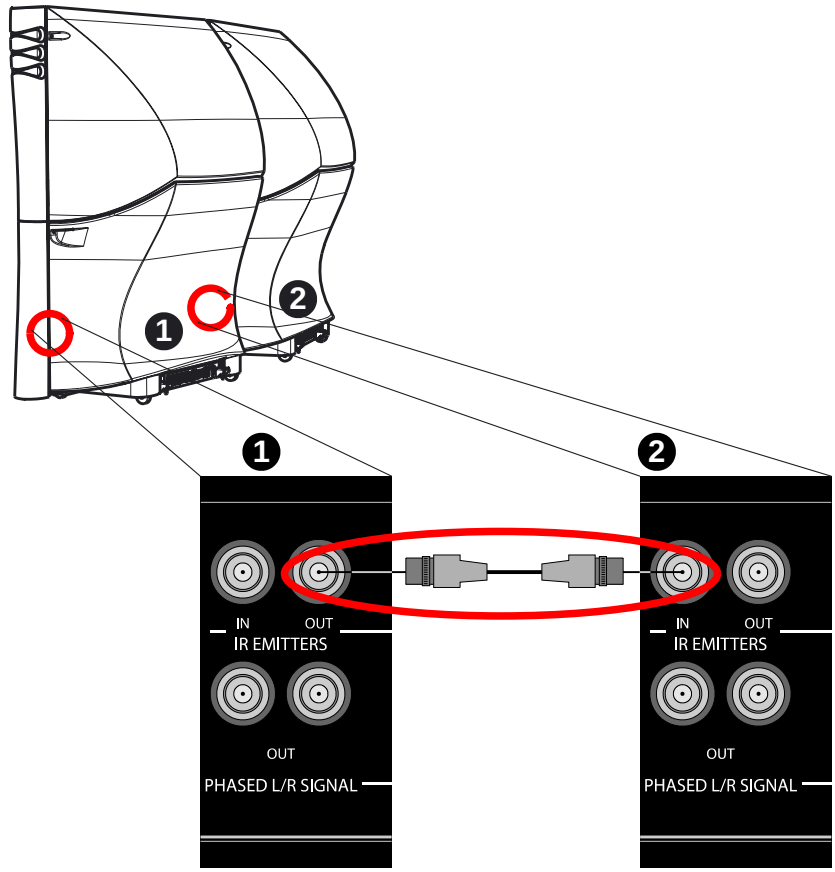


Image 6-7
Connect the 'IR Emitters Out' BNC Connector to the 'IR Emitters In' BNC

2. Synchronize the Stereo Sync Signal to the Emitters by connecting a 'Phased L/R Signal Out' BNC Connector to a free 'IR Emitters' (In or Out) BNC connector.

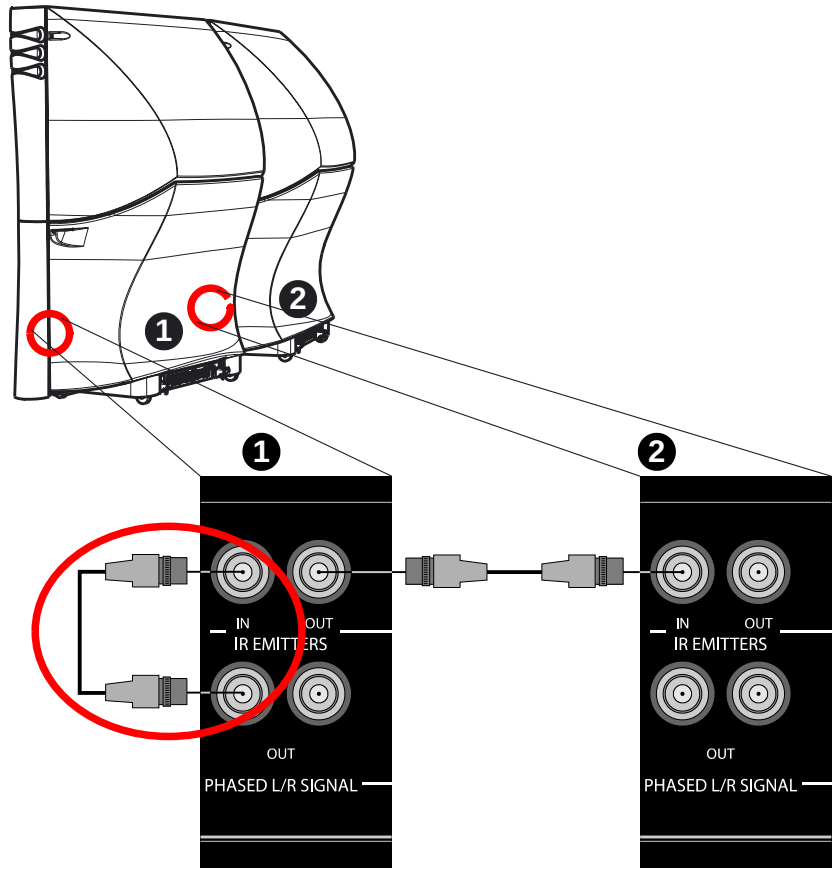


Image 6-8
Connect a free Phased L/R Signal Out BNC Connector to a free IR Emitter BNC connector

Caution: *Only make 1 link between a Phased L/R Signal Out' BNC Connector and a free 'IR Emitters' (In or Out) BNC connector.*

All projectors will run on a common Stereo Sync (Phased L/R) signal.

The IR Emitters will all work in sync.

How to connect the Phased L/R Signal in a Multi-Channel Configuration?

The Phased L/R Signal is 'Looped Through' all the i70 Trace+ Units of the Multi-Channel Configuration.

1. Connect a 'Phased L/R Signal' BNC Connector of the first i70 Trace+ to a 'Phased L/R Signal' BNC Connector of the second i70 Trace+.

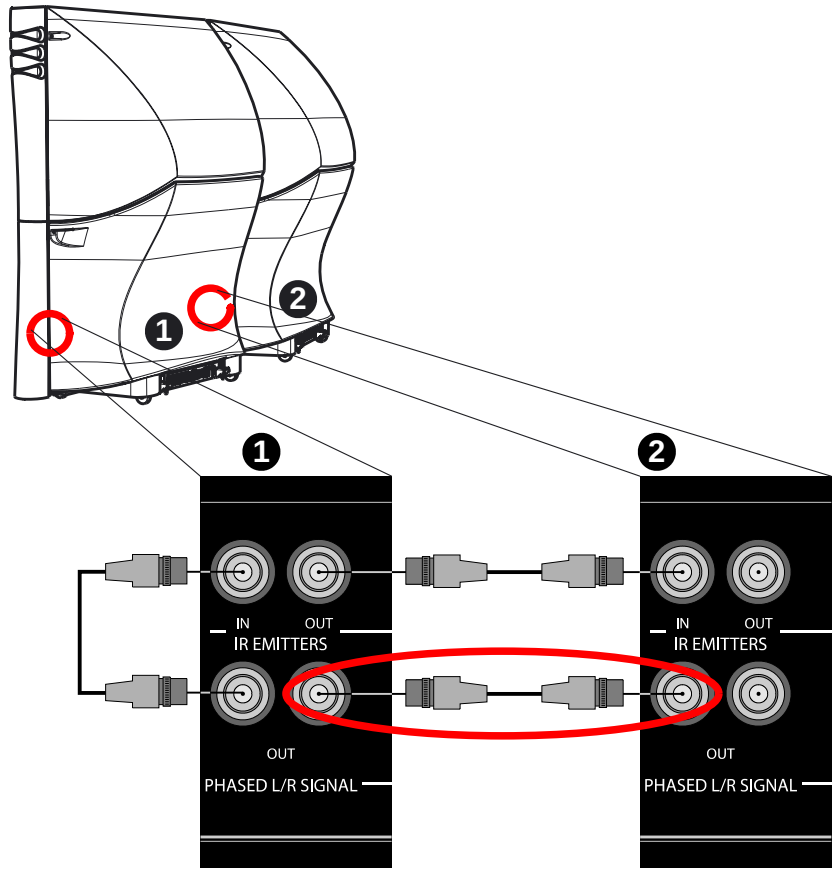


Image 6-9
Connect the Phased L/R Signal BNC Connectors

All projectors will run on a common Stereo Sync (Phased L/R) signal.

All Stereo IR Emitters will work in sync.

7. MULTIPLE MULTI-CHANNEL CONNECTIONS

This chapter will describe the connections for e.g. a setup with 2 Triple-Channel Configurations. Each Triple-Channel has its own IG.

Overview

- Multiple Multi-Channel Power Cord Connections
- Multiple Multi-Channel Input Connections
- Multiple Multi-Channel Stereo Connections

7.1 Multiple Multi-Channel Power Cord Connections

For more detailed information on Power Cords ("Power Cord Connection", page 37).

WARNING: Always use a Power Circuit that supports the necessary Current and Power Requirements for the complete Multi-Channel Configuration.

Power Consumption Specifications

This product should be operated from an AC power source. Each i70 Trace+ needs 12A/100V, 5A/240V. Check if the mains voltage and ampacity matches the projectors electrical ratings and ensure that the mains power system can support the i70 Trace+ power requirements: 1200 Watts for each Barco Trace Unit.

How to connect the Power Cords in a Multi-Channel Configuration?

All i70 Trace+ Units are connected to the wall outlet.

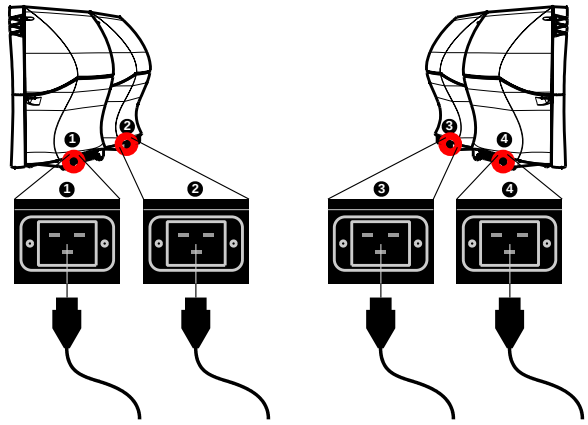


Image 7-1
Power Cord Connections in a Multiple Multi-Channel Configuration

WARNING: When using a power strip ensure the power strip cable supports the necessary current and power requirements for the complete system.

7.2 Multiple Multi-Channel Input Connections

For more detailed info on the Input Connection (see "Input Connections", page 39).

How to connect the Source Input in a Multiple Multi-Channel Configuration?

Each Triple-Channel has its own IG in this example, connect the Source Signal coming from each Multi-Channel IG to each Multi-Channel i70 Trace+ Configuration.

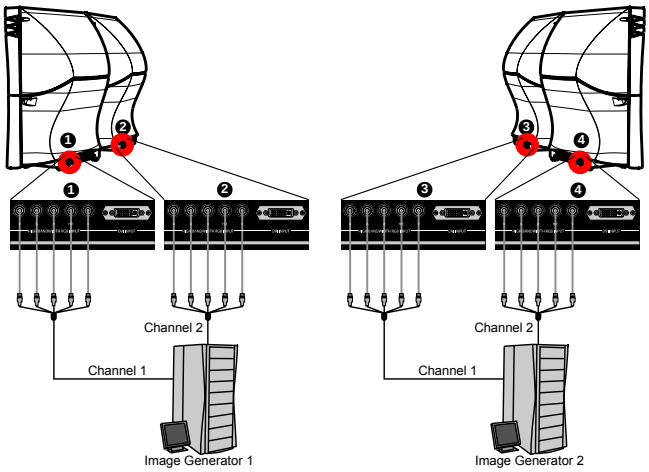


Image 7-2
Source Input Connections in a Multiple Multi-Channel Configuration

7.3 Multiple Multi-Channel Stereo Connections

How to Set Up the Stereo Parameters?

The Transport Delay Setting must be the same on all Projectors.

The L/R Phase must be same on all projectors, first adjust the L/R phase on the projector where the IR Emitter signal comes from, then put the same value on the other projectors as well.

For more detailed information on how to adjust these parameters please consult the Owner's Manual.

How to connect the Stereo Sync Signal in a Multiple Multi-Channel Configuration?

The Stereo Sync Signal coming from both IG's is connected to the Stereo In Mini DIN input on the Patch-Panel of both Triple-Channel i70 Trace+ Configurations.

On some IG's, the Stereo Sync is already present in the Vertical Sync Signal.

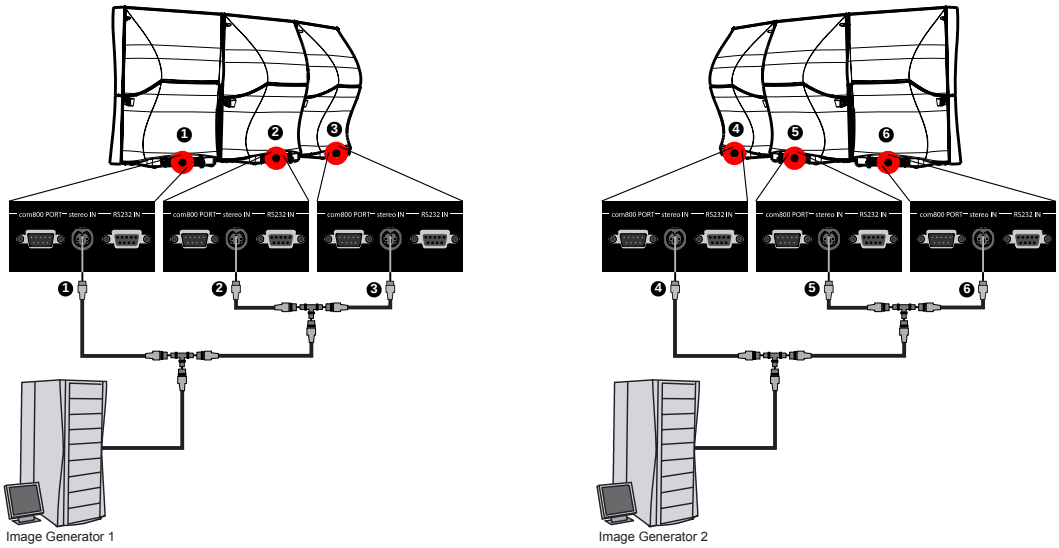


Image 7-3
Stereo Sync Connections in a Multiple Multi-Channel Configuration

How to connect the Stereo Emitter and Phased L/R Signal in a Multiple Multi-Channel Configuration?

The Stereo Emitter Signal + Phased L/R Signal are 'Looped Through' on all the i70 Trace+ Units of the Multiple Multi-Channel Configurations.

It is possible to let Triple-Channel 1 work synchronous with IG 1. Triple-Channel 2, that is in asynchronous mode, will then display the image at the frequency of IG 1.

Respect the following 2 rules when setting up such a configuration:

1. **Connect one 'Phased L/R Out' to a free 'IR Emitter' (In or Out) on a projector running in Synchronous Mode.**
2. **All Trace Units connected to the synchronous IG must be set in Synchronous Mode.**
3. **All other Trace Units (Triple-Channel2, Triple-Channel3, ...) must be set in Forced Asynchronous Mode.**

For more information on how to set a projector to 'Synchronous' or 'Asynchronous' Mode please consult the Trace Owner's Manual.

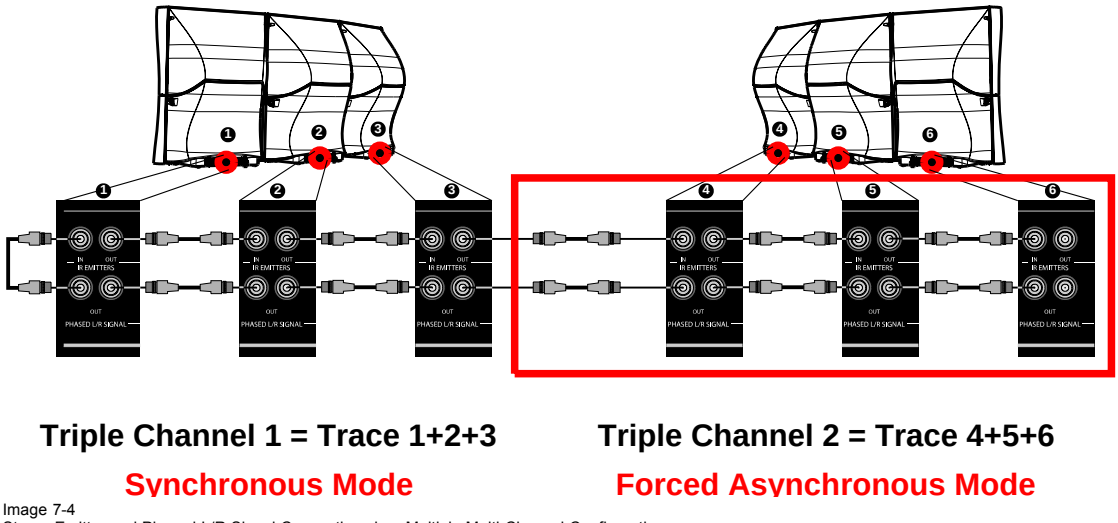


Image 7-4
Stereo Emitter and Phased L/R Signal Connections in a Multiple Multi-Channel Configuration

All projectors will run on a common Stereo Sync (Phased L/R) signal.

All Stereo IR Emitters in the room will work in sync.

A. ADJUSTMENT PROCEDURE

A.1 Rotation adjustment

Necessary tools

Open ended spanner M13

How to adjust the rotation of the projected image?

We assume the i70 Trace+ is installed as a Single-Channel non-Stereo Configuration, an image is projected on the screen (Source Signal or Internal Pattern).

1. Loosen the 2 bolts to remove the Rear Bottom Cabinet of the i70 Trace+.
2. Remove the Rear Bottom Cabinet.

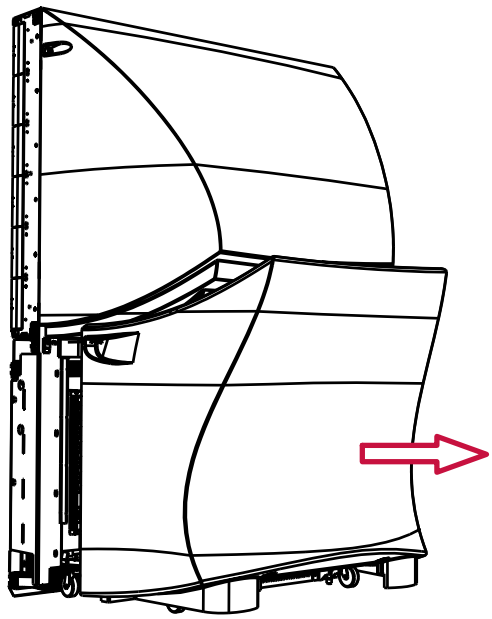


Image A-1

3. The rotation adjustment bolts are located on the rear bottom of the i70Trace+.

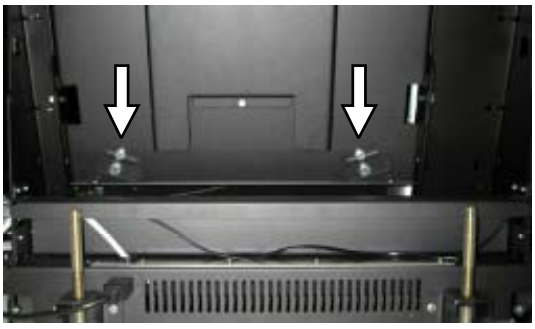


Image A-2

4. Use the open ended spanner on the rotation adjustment bolts to rotate the projected image.

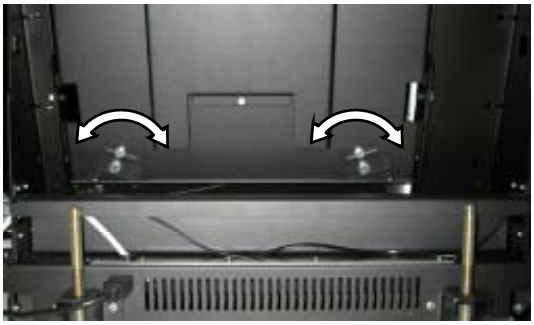


Image A-3

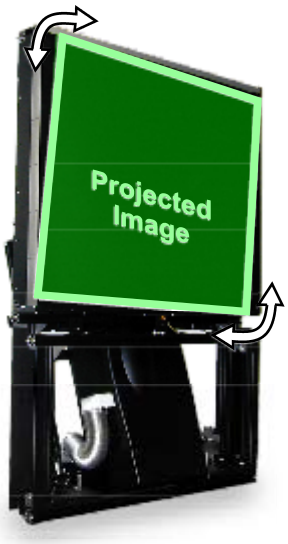


Image A-4

A.2 Tilt Adjustment

Necessary tools

Open ended spanner M17

How to adjust the rotation of the projected image?

1. Loosen the 2 bolts to remove the Rear Bottom Cabinet of the i70 Trace+.
2. Remove the Rear Bottom Cabinet.

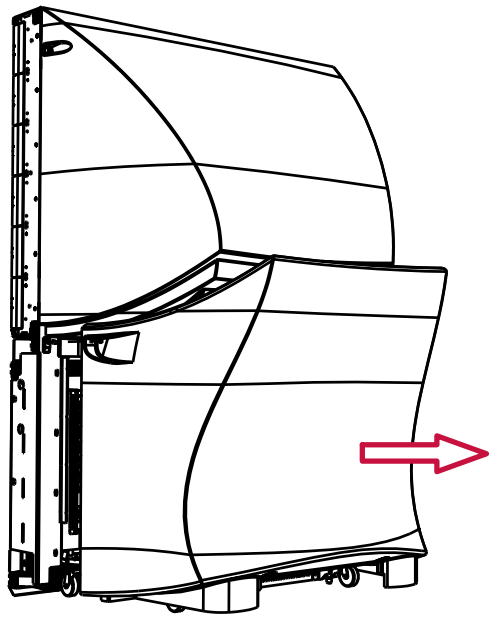


Image A-5

3. The tilt adjustment bolts are located on the rear bottom of the i70 Trace+

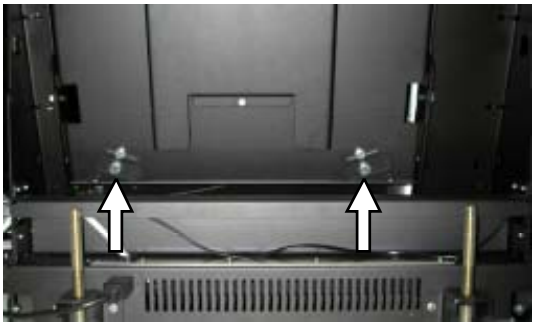


Image A-6

4. Use the open ended spanner on the tilt adjustment bolts to tilt the projected image.

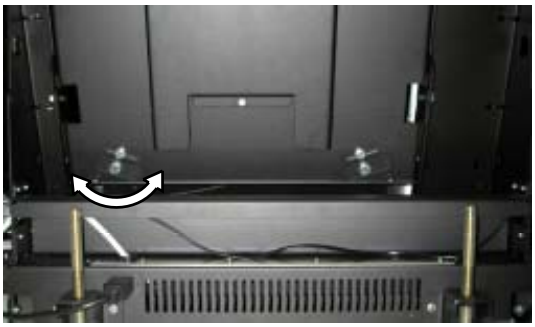


Image A-7

Image A-8

A.3 Adjusting the Mirror Position

Necessary tools

- Nut spinner M8
- Open ended spanner M24
- Flat Blade Screwdriver

How to Adjust the Mirror Position?

We assume the i70 Trace+ is installed as a Single-Channel non-Stereo Configuration, an image is projected on the screen (Source Signal or Internal Pattern).

1. Are the edges of the projected image parallel to the edges of the i70 Trace+ Screen?
   If yes, The Mirror Position needs no Adjustment skip this procedure.
   If no, Continue with the Mirror Adjustment.

Image A-9
The edges of the projected image are not parallel with the edges of the i70 Trace+ Screen

2. Loosen the 2 bolts to remove the Rear Top Cabinet of the i70 Trace+.

Image A-10
Loosen the 2 bolts to remove the Rear Top Cabinet

3. Use the nut spinner and the open ended spanner to loosen the Mirror Bolt.

Image A-11
Loosen the Mirror Bolt

4. The Mirror Bolt Holder is installed in the following default position.

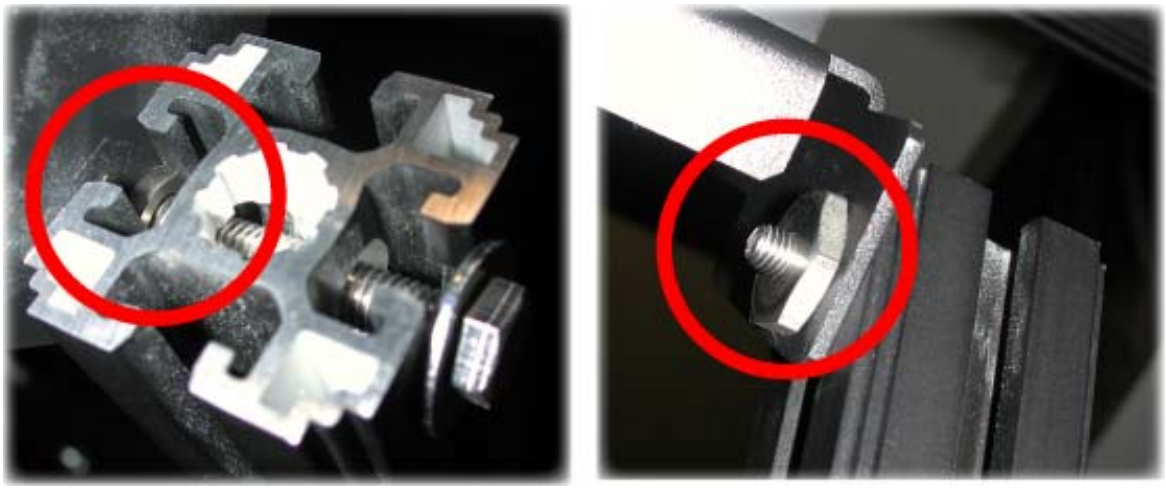


Image A-12
Mirror Bolt Holder installed in the default position

5. Use the Flat Blade Screwdriver to remove the Mirror Bolt Holder from the Mirror Frame.
6. Put the Mirror Bolt Holder in the reverse position to the Mirror Frame.

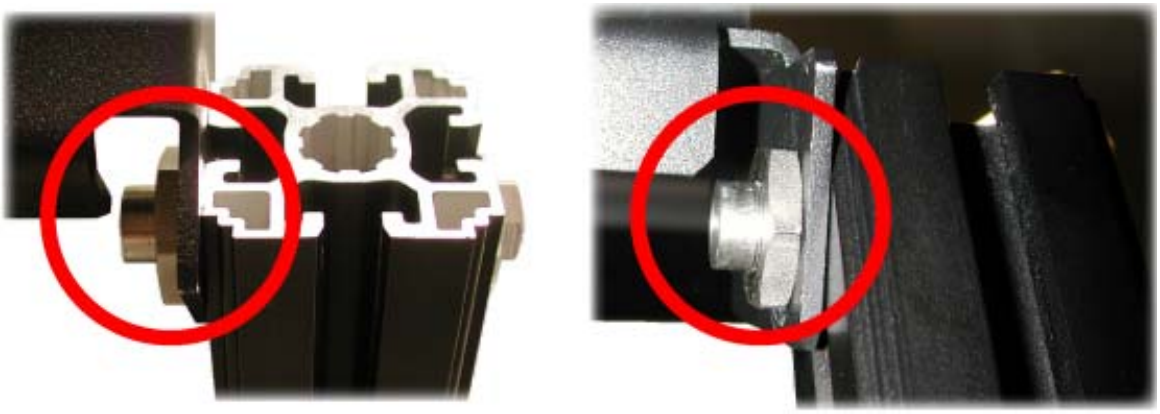


Image A-13
Mirror Bolt Holder installed in the reverse position

7. Insert the Mirror Bolt into the holder and tighten until snug.
8. Adjust the Mirror Position until the edges of the projected image are parallel to the edges of the i70 Trace+ Screen.

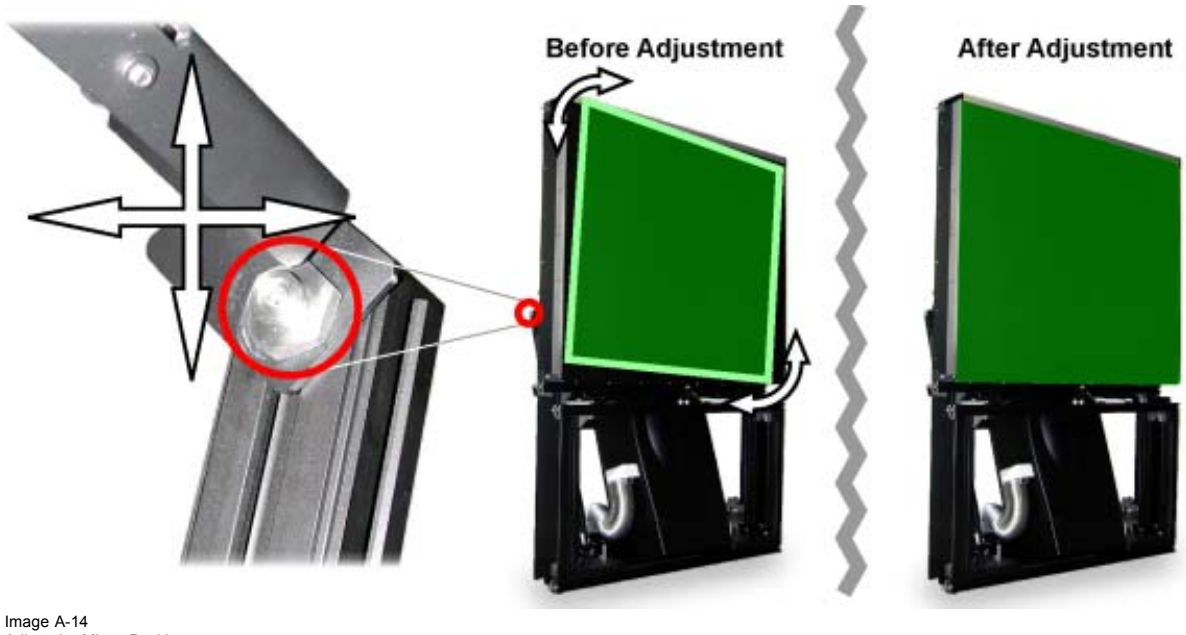


Image A-14
Adjust the Mirror Position

9. Use the nut spinner and the open ended spanner to tighten the Mirror Bolt securing the Mirror's Position.

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Revision Sheet

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Please correct the following points in this documentation (**R5976660/02**):

page	wrong	correct